Research Paper

A New Synthesis on the impact of Foreign Direct Investment on Economic Growth in Nigeria. Evidence from Autoregressive Distributed Lag (ARDL).

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Abstract
Foreign direct investment provides much-needed funding for investment in developing nations such as Nigeria, as well as enhancing job creation, managerial skills, and technology transfer.Therefore, this research investigates a New Synthesis on the impact of Foreign Direct Investment on Economic Growth in Nigeria. It explore time series data from 1986 to 2020 using autoregressive distributed lag (ARDL). The result shows that, foreign direct investment has a positive influence on economic growth, thus showing the importance of adopting favorable policies that can attract lnFDI in the economy. Moreover, lnINTR, lnREER, lnIMPT and lnUEP have negative influence on economic growth. This reveals that for the Nigerian economy and FDI to improve, government need to tackle problems relating to financial system as well unemployment in order to benefit from foreign direct investment in Nigeria. Therefore, the research recommends that policy makers must improve financial system or institutional quality in the country by introducing appropriate institutional reforms that can help and attract FDI. In addition, there should be a relaxation in the interest rate as well as effective exchange rate system which will encourage foreign and domestic small-scale investors that are willing to take credit for investments. Meanwhile, policymakers should make the business atmosphere conducive for the investors in terms of tax incentives and suchlike issues so that they can freely invest and be productive.
Key Words:Economic Growth, Foreign Direct Investment. ARDL.

I. Introduction

Nigeria is Africa's third-largest FDI recipient after Egypt and Ethiopia. The country is one of Africa's most promising growth poles, attracting a slew of investors in the hydrocarbon, energy, and construction sectors, among others. The repercussions of the oil counter-shock are felt throughout the country. FDI flows to Nigeria totaled USD 3,3 billion in 2019, down 48.5% from the previous year (USD 6,4 billion in 2018 due to the effects of austerity measures, according to[1]World Investment Report). In 2019, the overall stock of FDI was anticipated to be USD 98.6 billion. The United States, China, the United Kingdom, the Netherlands, and France are among the most important investors in Nigeria.

The objective of government policy through the Nigeria Enterprise Promotion Decree (NEPD) (indigenization policy) was to regulate rather than promote FDI, as previous Nigerian governments saw FDI as a tool for political and economic dominance. The NEPD was enacted in 1972 with the goal of limiting foreign equity participation in manufacturing and commercial sectors to no more than 60%. A second indigenization decree was issued in 1977, restricting foreign ownership participation in Nigerian businesses to 40%. As a result, between 1972 and 1995, the official FDI policy was restrictive[1].

The cessation of antagonistic measures for FDI began with the introduction of the structural adjustment program in 1986. The debt to equity conversion program as a component of portfolio investment was launched as part of a new industrial policy in 1989. In 1988, the Industrial Development Coordinating Committee (IDCC) was formed as a one-stop shop for facilitating and soliciting foreign investment. The Nigeria Enterprises Promotion Decree was repealed in 1995, and the Nigerian Investment Promotion Commission Decree 16 of 1995 was enacted in its place.

The NIPC absorbed and replaced the IDCC, allowing a foreign investor to establish a 100 percent owned business in Nigeria. NIPC will approve the application within 14 days (as opposed to four weeks under IDCC) or notify the applicant if the application is denied. Furthermore, the Foreign Exchange (Monitoring and Miscellaneous Provision) Regulation 17 of 1995 was promulgated in accordance with the NIPC decree to allow foreigners to invest in Nigerian enterprises or money market instruments with legally brought in foreign cash. The decree allows for the unrestricted regulation of dividends and capital in the case of a sale or liquidation.

The 1999 export processing zone (EPZ) program permits interested parties to establish enterprises and businesses within delineated zones, with the goal of exporting goods and services made or produced within the zone. In summary, the Nigerian government's policies to attract foreign investors as a result of the SAP can be divided into five categories: the Industrial Development Coordinating Committee (IDCC), investment incentive strategy, non-oil export stimulation and expansion, privatization and commercialization program, and a shift in macroeconomic management in favor of industrialization, deregulation, and market-based arrangement[2].

Nigeria wants to diversify its economy away from oil by developing a competitive manufacturing sector that will allow it to better integrate into global value chains and increase productivity. Nigeria's commitment to efficiently coordinate across these three critical areas to strengthen its trading and investment climate is shown in the recent merger of trade, industry, and investment under the auspices of the Federal Ministry of Industry, Trade, and Investment. A partially privatized economy, a favorable taxation structure, abundant natural resources, and a low labor cost are only a few of the country's primary benefits[2].

Widespread corruption, political instability, a lack of transparency, and insufficient infrastructure, on the other hand, hinder the country's FDI prospects. Foreign investment is also hampered by a high level of bureaucracy. Nigeria was placed 131st in the world for ease of doing business in the [2]. This is a significant improvement over the 2019 edition, when the country was rated 146th. Many subcategories of the rankings have improved for the country, including starting a business, dealing with building permits, receiving electricity, registering property, trading across borders, and enforcing contracts. For the second year in a row, Nigeria is among the top ten improvers. (Running a Business). Nigeria has been attracting strong inflows from American companies, including giants like Uber, and Facebook, as well as Emergent Payments, and Meltwater Group. China has also been investing considerably in the country, mainly in the textile, automotive and aerospace industries[3].

FDI exceeds aid, remittances, and portfolio investments as the most important source of foreign finance in many nations. Jobs are created, incomes and productivity are increased, management skills are improved, and technology transfer is accelerated as a result of the investments. FDI spillovers have resulted in improved working conditions and environmental standards. Regulatory reforms, as well as the modernization of industries, supply networks, and infrastructure, are all taking place[3]. FDI has a far greater impact than the initial investment. According to research funded by the Hinrich Foundation, about one-third of China's GDP was generated by foreign-invested companies' investments, activities, and supply chains in the mid-2010s.

These effects have aided China's rise to the world's second largest economy, leading exporter, and top investment destination. Despite its ability to aid economic recovery, FDI has been steadily declining in recent years, both globally and in developing countries. Instead, restrictive policies like FDI screening have grown in popularity [4]. In May 2016, the Monetary Management Committee (MPC) voted to increase the flexibility of exchange rate policy while leaving other monetary policy parameters unchanged. This was the first in a series of monetary measures aimed at rescuing the foreign exchange (FX) market from a near-crisis position.

The FX market's condition was aggravated by economic policy paralysis, which was triggered by a sharp drop in world oil prices and domestic oil output shocks. The average naira exchange rate fell in the interbank segment of the foreign currency market as a result of this new policy. As a result, the interbank market exchange rate opened at N197.00/US$ and concluded at N292.90/US$. At the MPC meeting in July 2016, the Central Bank of Nigeria [5] bolstered the measure by raising the monetary policy rate by 200 basis points (bps) from 12.00 percent per annum (pa) to 14 percent per annum.

The decision was made with the goal of attracting foreign portfolio investment and stabilizing the naira. Imported capital increased by 74.84 percent from $1.04 billion (bn) in the second quarter of 2016 (Q2'16) to $1.82 billion (bn) in the third quarter of 2016. Foreign Portfolio Investment (FPI) accounted for 85% of the entire increase in the quarter. The enthusiasm surrounding the flexible exchange rate and higher interest rate was short-lived, as capital imported in Q4'16 fell 15% to $1.55 billion, and capital imported in Q1'17 fell 41.36 percent to $908.27 million[5].

This was partly owing to investor concerns about the significant difference between the interbank forex rate and the parallel market, as well as mistrust about the flexible forex policy. This tendency lasted until late April 2017, when the Investors Export Foreign Exchange Window (IEFX) was created [5].

The following three essential questions will be addressed in this paper: what is the impact of FDI in increasing Nigeria's economic growth prospects? Is foreign direct investment (FDI) helping Nigeria achieve its economic growth goals? To what extent does FDI influence Nigeria's economic growth and the overall well-

being of its citizens, both now and in the future? Most FDI research publications prioritize new syntheses over their positive benefits on host country economic growth, but both will be discussed in this work.

The primary goals of this research paper are to empirically examine the new synthesis on the impact of FDI on economic growth in Nigeria, as well as to investigate both the short and long run relationships between FDI and economic growth in Nigeria over the period 1986 to 2020 using the available data. This study is divided into five sections: section one, which discusses FDI and how it works, section two, which reviews literature experimentally, section three, methodology, section four, results and discussions, and section five, which concludes, summarizes, and makes policy recommendations.

II. Literature Review

Economic growth, according to [6], is "the process by which a country's actual per capita GDP increases over time." According to him, economic growth is defined as an increase in the number of products and services produced through time. As a result, growth happens when a country's productive capacity expands, allowing it to generate more goods and services. As a result, foreign direct investment (FDI) has been viewed as a potential source of growth [7].It goes without saying that this research report cannot be produced without a preceding reference to certain scholarly opinions on the subject. Researchers continue to digest numerous concepts from previous literatures, and this study is no exception. According to [8], there are five major indicators that influence FDI inflows in general. The real interest rate, trade openness, GDP growth, inflation rate, and exchange rate are the variables. Our empirical analysis of the data demonstrates that trade openness has a statistically significant beneficial impact on FDI inflows into the economy. If the economy is to see long-term FDI inflows, policies that promote trade and assist GDP growth should be favored.

[3]Finds that foreign direct investment (FDI) has not contributed significantly to Pakistan's economic growth between 1980 and 2006, when compared to domestic capital and labor. As a result, the government must devise an FDI policy that is more growth enhancing than growth retarding. More Greenfield investment, as well as large-scale manufacturing investment, should be encouraged in order to improve Pakistan's exports. The best reason for FDI is that it encourages exports in the host country.

[9]Discovered that foreign direct investment in a developing country like Pakistan would have a detrimental impact on the country's economic performance and growth, and that the dependency hypothesis would hold true in this scenario. The outcomes of the study were consistent with the initial expectations, indicating that FDI had a negative impact on the economy. While [10], It was demonstrated that FDI inflows had no independent impact on economic growth. Furthermore, the direction of causality is not from FDI to GDP growth, but rather from GDP growth to FDI. That is, there has never been a direct growth impact of FDI on the Sri Lankan economy.

The influence of DIN and TP on GDP growth rate is positive, and direct independent causality from DIN and TP to GDP as well as GDP to DIN and TP has been observed. The overall sentiment of civil society and international companies regarding FDI in the country is supportive. However, due to political instability and disturbance, poor law and order, direct and indirect regulatory barriers, political instability and the implied policy instability, poorly developed infrastructure facilities, low levels of human capital, and a lack of transparency in trade policy, the investment climate in Sri Lanka has not improved.

In a similar vein, [11] looked examined a group of 12 Latin American countries from 150 to 1985. His findings indicate that FDI has a favorable and considerable impact on economic growth. Furthermore, the analysis demonstrates that FDI productivity is higher than domestic investment productivity. While [12] used a macro-model to analyze the influence of FDI in fostering growth for a pooled time series cross section data of 16 developing nations from 1966 to 1988. Argentina, Brazil, Chile, Egypt, India, Mexico, Nigeria, Pakistan, Sri Lanka, Turkey, Venezuela, and five Pacific Basin countries (Indonesia, Korea, Malaysia, Philippines, and Thailand) were included in the sample.He did not discover FDI to have a significantly different influence on the rate of economic growth than domestically financed investment for his entire sample, since the coefficient of FDI after adjusting for gross investment rate was not statistically significant different from zero. Foreign direct investment (FDI) has a strong negative impact on domestic investment, implying that it crowds out domestic investment. However, this effect differs by country, and FDI appears to have squeezed out indigenous investment in Pacific Basin countries. According to [13], FDI inflows had a considerable positive influence on the average growth rate of per capita income for a sample of 78 developing and 23 developed nations.When the sample of developing nations was divided into two groups based on per capita income, however, the effect of FDI on growth in lower-income developing countries was not statistically significant, but it was still positive. They claim that LDCs learn relatively little from MNEs because domestic businesses are too technologically advanced to be either imitators or suppliers to MNEs. In this regard, [14]did another study in which he included 69 developing nations in his sample. The influence of FDI on host country growth is determined by the stock of human capital, according to the study.They conclude that the flow of advanced technology brought in by FDI can only increase the rate of growth by interacting with the country's absorptive capacity. They also find that

FDI stimulates total fixed investment in a way that is not proportional. To put it another way, FDI attracts domestic investment. The results, however, are not consistent among specifications.

[15],found that the growth effect of FDI is positive in export promoting countries but negative in import substituting countries using annual cross-sectional data for 46 developing countries in a fixed effects model. Similarly, [16], using cointegration and error correction techniques, discovered that FDI boosts economic growth in 11 of the study's countries: Hong Kong, Indonesia, Singapore, Taiwan, and Mexico; and for the remaining six countries with no cointegration links, unidirectional causal effects were discovered in five of them.[17], conducted a review of the literature on FDI and Economic Growth and discovered that adequate levels of human capital, well-developed financial markets, and open trade regimes all contribute positively to the FDI-EG relationship, whereas reliance on foreign investment and technical gaps contribute negatively. Furthermore, the impact of the host country's wealth level is complex, and the quality of the political climate must be considered. [18], uses annual time series data to discover that the causes of FDI may be area and nation specific, in the sense that what occurs in one country may not occur in another. For example, while trade liberalization has drawn FDI into some countries, such as Bolivia [19], it has not done so in Nigeria. Furthermore, Nigeria's domestic macroeconomic policies encourage FDI inflows, despite the fact that the country's human capital does not.

In a study by [20], the empirical findings reveal that there is a negative association between economic growth (GDP) and FDI, contrary to the belief of growth and development authorities. This negative link could be due to a lack of FDI funds invested in the Nigerian economy, which has not been able to have a beneficial or growth-enhancing influence. Despite the fact that GDP and FDI have a negative connection, this does not suggest that FDI is not viable for the Nigerian government and private households because spillovers are distinct in type. It was also observed that the key locational factors of FDI in Nigeria include exports, exchange rate, and political factor.

The necessity for a theoretical framework to underpin this research activity became an appealing thing as a result of the evaluated empirical literatures above. However, according to the New Theory of Economic Growth, FDI has the potential to alter not only the level of output per capita, but also the rate of growth. Various arguments have been developed in this literature to explain why FDI may potentially enhance the growth rate of per capita income in the host country. The identified channels to boost economic growth include increased capital accumulation in the recipient economy, increased capital accumulation in the recipient economy, and increased capital accumulation in the recipient economy, Contract and demonstration effects improved the productivity of locally held host country enterprises, as well as their exposure to harsh competition, technical progress, human capital augmentation, and higher exports.However, the extent to which FDI contributes to growth is determined by the recipient country's economic and social conditions, or in other words, the quality of its environment [21]. The rate of savings in the host country, the degree of openness, and the level of technological advancement all influence the quality of the environment. Increased FDI would benefit host countries with high savings rates, free trade agreements, and high technical products. By creating a contagion effect, FDI accelerates technical advancement in the host country, making it easier for local enterprises to adopt sophisticated management methods [22].

Figure 1 Nigerian Foreign Direct Investment (FDI) profile from 1986-2020
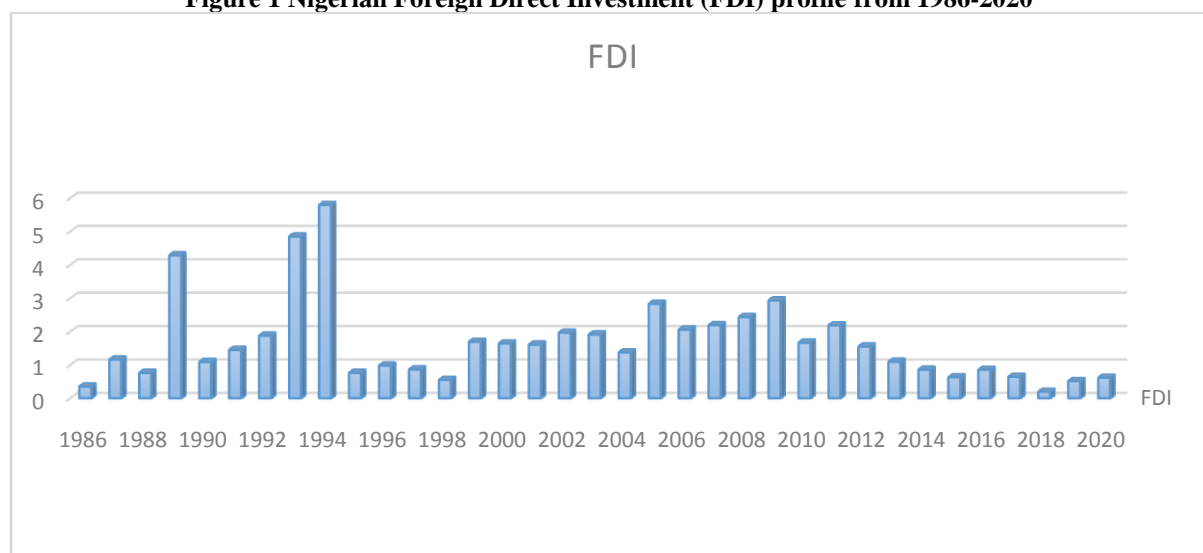
Source: Authors sketch using Data from World Bank (WDI) 2020.

Foreign direct investment (FDI) is now universally acknowledged as a significant part of the recent wave of globalization. According to [23], global FDI increased from US$57 billion in 1982 to US$1,271 billion in 2000. Despite this, only a few countries have been able to attract major FDI. Indeed, Africa as a whole, and particularly Sub-Saharan Africa (SSA), has not reaped the benefits of the FDI boom. FDI inflows into Africa have remained relatively stable since 1970, rising from an annual average of roughly US$1.9 billion in 1983–87 to US$3.1 billion in 1998–1992 and US$4.6 billion in 1991–1997.

Although Africa's outlook for FDI is good, according to UNCTAD's [24], the projected boom has yet to materialize. For a variety of factors, including the region's terrible reputation, insufficient infrastructure, corruption and foreign exchange shortages, and an unfriendly macroeconomic policy environment, FDI is still concentrated in only a few countries. Nigeria is one of the few African countries that has regularly profited from foreign direct investment. According to [25], Nigeria was the continent's second-largest FDI recipient in 2001 and 2002, after Angola.

Figure 1 depicts the details of foreign direct investment into Nigeria from 1986 to 2020. In actual terms, this was an improvement over the 1980s slump. Although foreign direct investment (FDI) accounts for a minor percentage of the country's GDP, it increased dramatically in 1989, with an estimated 4.1 percent growth. From then on, FDI decreased until the first period of 1991 to 1994, when Nigeria experienced the greatest FDI influx into the economy, with an estimated 5.8%.

This could be due to the country's shift from a military to a democratic government. The FDI trend has been oscillating until recently, when the Nigerian government has experienced a decrease in FDI inflow, particularly between 2015 and 2018. This could be due to insecurity issues such as Boko Haram, banditry, and kidnapping.

III.   Methodology

To minimize misleading regression and autocorrelation issues, a stationarity test utilizing Augmented Dickey-Fuller (ADF) is used to draw conclusion for this study concerning the time series examination, as proposed by [26]. The study used data from the World Development Indicators Database 2020, which covered the years 1986 to 2020.

Model Specification
The model for this study focuses on a New Synthesis on Foreign Direct Investment and Economic Growth in Nigeria. Evidence from Autoregressive Distributed Lag (ARDL) from (1986-2020). The dependent variable of the research is the real gross domestic product (RGDP) whereas the independent variables includes foreign direct investment (FDI), export (EXPT), import (IMP), interest rate (INTR), real and effective exchange rate (REER) and unemployment (UEP).
 The model is specified as:
$$RGDP = f\,(FDI, EXPT, IMPT, INTR, REER, UEP) \qquad 1$$
The econometric relationship to be estimated is specified as:
$$lnRGDP = \beta0 + \beta1\,lnFDI + \beta2\,lnEXPT + \beta3\,lnIMPT + \beta4\,lnINTR + \beta5\,lnREER + \beta6\,lnUEP + \varepsilon t \qquad 2$$
Where:
$lnRGDP_t$ = Real gross domestic product (annual% in current US dollars)
$lnFDI_t$ = Foreign direct investment (% of GDP)
$lnEXPT_t$ = Total Export of goods and services (% of GDP).
$lnIMPT_t$ = Official development assistance received (% of gross capital formation)
$lnINTR_t$ = Lending rate(% of bank rate including short and medium term).
$lnREER_t$= Real effective exchange rate index (annual %).
$lnUEP_t$ Total unemployment (% of labor force)
ε_t= Stochastic Error Term.

Autoregressive Distributed lag Model (ARDL)
The ARDL model is a theoretical approach for modeling time series relationships. As a result, using the F-statistic to establish the significance of the coefficients of the studied lagged variables, the study will use the ARDL bounds test cointegration technique proposed by [27] as the best and most realistic model. The following is a simple ARDL model:

$$\propto_t = \beta_1 \gamma_{t-1} + \cdots \beta_j \gamma_{t-j} + h_0 x_t + \cdots h_k x_{t-k} + e_t$$

(3)
This can be re-writing as:

$$\gamma_t = \sum_{i=1}^{j} \beta_i \, \gamma_{t-i} + \sum_{i=0}^{k} h_i x_{t-l} + \varepsilon_t$$

(4)

$$\Delta lnRGDP_t = \alpha_0 + \sum_{i=1}^{j} \alpha_{1i} \, \Delta lnRGDP_{t-i} + \sum_{i=0}^{k} \alpha_{2i} \, \Delta lnFDI_{t-i} + \sum_{i=1}^{j} \alpha_{3i} \, \Delta lnREXPT_{t-i} \sum_{i=1}^{j} \alpha_{4i} \, \Delta lnIMP_{t-i}$$
$$+ \sum_{i=1}^{j} \alpha_{5i} \, \Delta lnINTR_{t-i} + \sum_{i=1}^{j} \alpha_{6i} \, \Delta lnREER_{t-i} + \sum_{i=0}^{k} \alpha_{7i} UEP_{t-l} \quad + \varepsilon_t$$

(5)

This means that the dependent variable is regressed on its own lags, as well as the lags of independent variables. The ARDL model described above is known as the ARDL (j, k) model, referring to the number of lags j and K in the model. Where(t) stands for white noise and error term, and the first difference operator (ln) stands for the variable's log. Overall, if the estimated "F-statistics" value is greater than both the lower (I(0)) and upper bounds (I(1)), then the variables are cointegrated, and H0: = 0 of no cointegration is rejected. The decision is indecisive when the f-values are between the upper and lower boundaries.

Diagnostic Checks

Various stability and diagnostic tests must be done in order to determine the model's optimum match. Plotting the recursive Cusum and Cusum of squares tests cited by Brown et al. is one approach of finding structural break (1975). The decision rules state that if the plots vary from the 5% significance thresholds, the model has structural break(s). Last but not least, ARDL has data on the structural break in time series data [28]. Adequate modification of the ARDL model's orders is adequate to concurrently account for residual serial correlation and the problem of endogenous variables, [27]. As a result, the model used in this investigation falls within the confidence intervals. Serial correlation, heteroscadasticity, and Jarque-Bera normalcy are other tests to consider.

IV.   Results and Discussion

Figure 2 Graphical Analysis
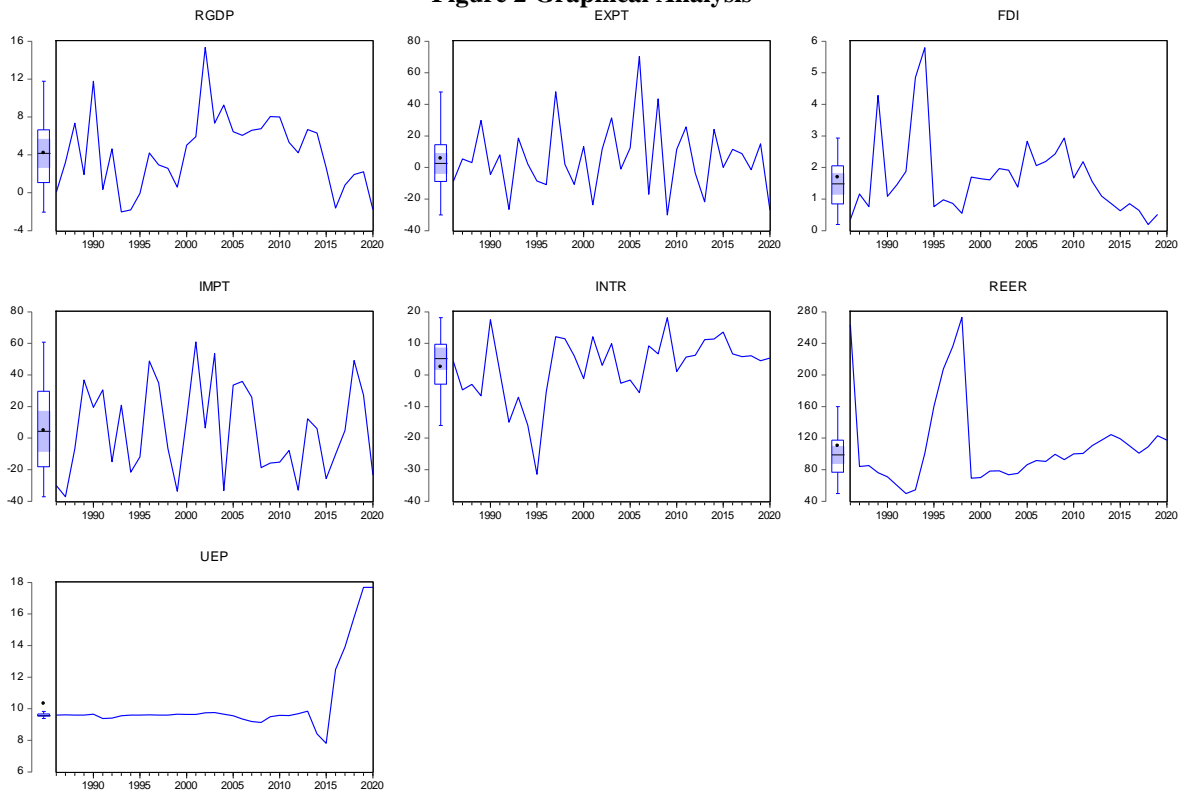
In the figure 2, the real GDP exhibit some upward trends with cycles at the beginning of the sample periods which might be related to the booms and slump of the oil prices at the international market which has consequential effect on the local economic activities. RGDP decline drastically in 1994. However, from 1995 RGDP continue increasing until 2003 where it continue declining throughout the study period.The EXPT also shows some upward trends with cycles at the beginning of the sample periods. In the early 1999 the total export faces a sharp decline until 1994 where it exhibit an upward trend with some fluctuations until throughout the study period which might be related to the abandoning agricultural activities which might boost the total export of the country.So also graph for the FDI appears to exhibit upward trend and fluctuations from 1986 through 1994 where there is a sharp decline until early stage of 1999 where FDI continua to improve until the last phase of 2013 where it continua declining throughout the sample period. This might be as result of persistent insecurity problemsin the country.

From the figure it appears that IMPT have exhibit an upward trend 1989 where it continua declining until 1994 where it maintain an upward trend until 1996 where it started to increase with fluctuations until 2005 with a sharp decline. The total import continua fluctuating throughout the remaining period. These trends might be associated with the problem of abandoning agricultural activitiesin the country.However, INTR depicteda downward trend with some cyclical behavior until 1999 when it begins to increase until 1992 when it exhibit a downward trend with fluctuations until 2015 where it started decreasing throughout the remaining period.The REER also shows a sharp decline in the beginning of the study period until 1994 where it exhibit upward trends until the beginning of 1998 through 1999 where there is a sharp decline until the last phase of 2000 where it started exhibiting an upward slower trend throughout the study period. This might be as a result of uncertainty surrounding the Nigerian financial system. UEP maintain steady trend in the beginning of the sample period until 2012 through 2014. However, in 2015 unemployment continua to increase throughout the remaining period of study.

In virtually all the cases, there is clear indication that, the series under investigation are non-stationary unless proven otherwise by formal test such as the Dickey fuller test. Hence, we can informally state that these series are not stationary. However to formally justify this assertion, Augmented Dickey fuller unit root test is being conducted.

Table 1 Descriptive Analysis

	lnRGDP	lnEXPT	lnFDI	lnIMPT	lnINTR	lnREER	lnUEP
Mean	4.379565	6.704206	1.693507	5.794378	2.464050	110.0526	10.11529
Median	4.430627	4.211484	1.501216	5.360444	5.103884	96.10752	9.600000
Maximum	15.32916	70.37563	5.790847	60.88926	18.18000	272.9240	17.69000
Minimum	-2.035119	-30.01776	0.195183	-37.14301	-31.45257	49.73381	7.810000
Std. Dev.	3.879071	21.71332	1.256518	28.58364	10.23615	55.47151	1.961974
Skewness	0.493501	0.744659	1.642679	0.216318	-1.155184	1.805934	2.700742
Kurtosis	3.381080	3.825500	5.613687	1.872048	4.912971	5.448299	9.725649
Jarque-Bera	1.585810	4.107652	24.96867	2.067553	12.74611	26.97299	105.4147
Probability	0.452528	0.128243	0.000004	0.355661	0.001707	0.000001	0.000000
Observations	34	34	34	34	34	34	34

Table 1 shows that lnRGDP has a mean value of 4.4, while lnEXPT, lnFDI, lnIMPT, lnINTR, lnREER, and lnUEP have mean values of 6.704, 1.639, 5.794, 2.464, 110.052, and 10.115, respectively. The median values for lnRGDP, lnEXPT, lnFDI, lnIMPT, lnINTR, lnREER, and lnUEP are 4.430, 4.211, 1.501, 5.360, 5.103, 96.107, and 9.600, respectively. lnRGDP, lnEXPT, and lnIMPT are normally distributed with asymmetric skewness around their mean.Positive skewness is present in lnFDI, lnREER, and lnUEP, implying a large right tail with higher values than the sample mean, whereas lnINTR is negatively skewed. lnRGDP and lnEXPT have a normal distribution, whereas lnFDI, lnINTR, lnREER, and lnUEP have a leptokurtic peak curve with values greater than the sample mean. lnIMPT, on the other hand, are platykurtic.

Table 2 Augmented Dicky Fuller Unit root Test

Variables	At level (5%)	At first Difference (5%)
lnRGDP	-2.951125	-2.960411
	(0.0090)	(0.0050)
lnEXPT	-2.951125	-2.957110
	(0.0000)	(0.0000)
lnFDI	-2.954021	-2.957110
	(0.0048)	(0.0000)
lnIMPT	-2.951125	-2.963972
	(0.0002)	(0.0001)
lnINTR	-2.951125	-2.960411

	(0.0129)	(0.0005)
lnREER	-2.951125	-2.954021
	(0.0031)	(0.0000)
lnUEP	-2.976263	-2.954021
	(0.2389)	(0.0026)

Figures in parenthesis indicates probability values at 5%

After both the first and second difference, the ADF result for lnRGDP, lnFDI, lnREER, lnEXMPT, lnINTR, and lnIMPT is of order I(0), as shown in Table 2. This indicates that the variables are level stationary. At first glance, UEP appears to be stationary at first difference. As a result, the test meets the requirement for applying the ARDL bounds test to the cointegration approach because none of the variables are I. (2).

Table 3 Bond Test for cointegration result

Model		ARDL (2, 2, 2, 2, 2, 2)		
Optimal Lag		2		
F-statistics (Bound test)		5.490898		
Critical values	At 1%	At 2.5%	At 5%	At 10%
Lower Bound I(0)	2.88	2.55	2.27	1.99
Upper Bound I(I)	3.99	3.61	3.28	2.94

The F-statistic value (5.490898) is larger than the top and lower limits values, as indicated in Table 3. The findings suggest that the study variables of interest have a long-term relationship base on AIC criterion,[27].

Table 4 Short Run Coefficients Estimates. (Selected Model: ARDL (2, 2, 2, 2, 2, 2).

Variables	Estimates	t-Statistic	Prob.*
lnRGDP(-1)	-11.03225	-2.558060	0.0138
lnRGDP(-2)	-6.206205	-2.574241	0.0133
lnEXPT	42.82498	3.514093	0.0009
lnEXPT(-1)	0.466323	2.364692	0.0205
lnEXPT(-2)	0.057181	1.266630	0.2315
lnFDI	7.635609	2.534218	0.0140
lnFDI(-1)	1.582129	2.050466	0.0364
lnFDI(-2)	0.573752	2.023741	0.0477
lnIMPT	-0.027818	-0.034785	0.9729
lnIMPT(-1)	-6.372178	-2.763141	0.0077
lnIMPT(-2)	-0.042415	-1.308006	0.2175
lnINTR	0.145245	-1.581302	0.0142
lnINTR(-1)	-0.216406	-1.859749	0.0899
lnINTR(-2)	0.185315	1.185944	0.2606
lnREER	-0.07105	-3.20405	0.0146
lnREER(-1)	-0.034851	-1.509410	0.1594
lnREER(-2)	0.047582	2.234362	0.0472
lnUEP	-0.261713	-5.637057	0.0231
lnUEP(-1)	-0.568833	-5.814471	0.0317
lnUEP(-2)	-0.641634	-0.631559	0.5406
ECT(-1)	0.108519	2.781258	0.0179

With the Exception for IMPT, which is not statistically significant, the short-run coefficients demonstrate that lnRGDP, lnFDI, lnREER, lnEXPT, lnINTR, and lnUEP are statistically significant and are caused by their lags, as shown in Table 4. For instance, the link between lnRGDP in the short run in the first and second lag has an endogenously positive impact on the dependent variable, while it is self-adjusting in the third lag accordingly. lnEXPT, on the other hand, has a positive and substantial effect on the dependent variable at 1% up to two lags.By implication, this suggests that an increase in total export has a positive economic

influence on the Nigerian economy's growth performance, which is caused by the lags effect. As a result, lnFDI shows a correct sign with a positive and statistically significant impact on the Nigerian economy's performance. The upshot is that an increase in foreign direct investment in the economy can result in positive and considerable advantages to the Nigerian economy's economic growth dynamics by two lags.

On the other hand, when the economy's imports of goods and services rise, lnIMPT can have a negative impact on economic performance. The lnIMPT, on the other hand, is becoming increasingly linked to economic performance, and it can alter growth performance by up to two lags. The implication is that an increase in the import of goods and services has a negative impact on the Nigerian economy's performance. lnINTR also shows a positive but statistically negligible impact on the Nigerian economy in the first lag and a negative impact in the second lag.

Similarly, in the first lag, lnREER showed a negative and statistically significant impact on the dependent variable, whereas in the second lag, it showed a positive and statistically significant impact on Nigerian growth performance. Finally, at all lags, lnUEP has a negative and statistically significant effect on the dependent variable, implying that an increase in the unemployment rate will have a negative impact on Nigeria's economic growth. Table 4's error correction term, on the other hand, indicated a correct sign with a value of -0.1085 and a significant probability of 0.0179. As a result, the -0.1085 denotes a 10% speed of adjustment to equilibrium in the following period. As a result, after several shocks to the system, the system is capable of converging towards an equilibrium path. As a result, for Nigeria's economic growth to increase, foreign direct investment must account for at least 10% of GDP each year. As a result, restoring equilibrium will take at least ten years unless equilibrium actors (i.e., the government and monetary authorities) undertake active policies and create a favorable environment for foreign investors, which will boost growth performance.

Table 5 Long Run Coefficients Estimates.

Variable	Estimates	t-Statistic	Prob.
lnEXPT	0.978575	-5.269381	0.0137
lnFDI	4.319499	-3.242955	0.0248
lnIMPT	-0.671909	-2.437453	0.0381
lnINTR	-1.051932	-4.197713	0.0184
lnREER	-0.460198	-2.764091	0.0279
lnUEP	-1.523996	-3.145895	0.0488

As shown in Table 5, the total export (EXPT) has positive and statistical influence on growth performance of Nigeria. Also foreign direct investment (FDI) has positive and statistically impact on Nigerian economy. The real effective exchange rate negatively affects economic performance. However, the import (IMPT) of goods and services negatively affects economic performance and is significant to induce any effect on the Economic growth of Nigeria. Finally, interest rate (INTR), real and effective exchange rate (REER) and unemployment (UEP) has negative effect on economic performance in the long run in respect to Nigerian economy.

Table 6 Diagnostic Checks

Breusch-Godfrey Serial Correlation LM Test:			
F-statistic	1.254318	Prob. F(2,9)	0.3307
Obs*R-squared	6.975312	Prob. Chi-Square(2)	0.0306
Heteroskedasticity Test: Breusch-Pagan-Godfrey			
F-statistic	0.422136	Prob. F(20,11)	0.9548
Obs*R-squared	13.89554	Prob. Chi-Square(20)	0.8358
Scaled explained SS	5.415222	Prob. Chi-Square(20)	0.9995

Table 6 provides the estimated findings based on goodness of fit and diagnostics, demonstrating that our model is well-fitting because it passes all main econometric tests such as serial correlation, Heteroscedasticity, and normality. The results also demonstrate evidence of the model's goodness of fit, no serial correlation, and homoscedasticity, since the coefficients of the fitted dependent variable's power are greater at all significant levels. The residual stability robustness assessments from Cusum and Cusum of squares in figure 3 below.
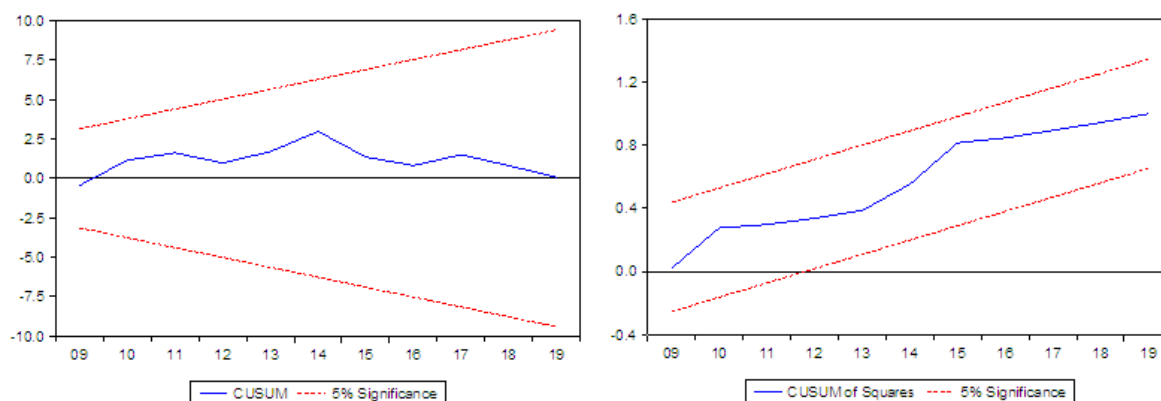
Figure 3 Cusum and Cusum Squares Test

Where the decision requires the plots of statistics to fall within the significance level boundary of 0.05. The study concludes that the ECM model is stable overtime because the plots from both tests satisfied the above 0.05 stability condition.

V. CONCLUSION AND POLICY IMPLICATION

In recent times, researchers have continued to examine the capability and ability of the developing countries including Nigeria to benefit from foreign direct investment due to the inconsistent effect of foreign direct investment on economic growth in earlier studies. Therefore, this research investigates the impact of foreign direct investment on economic growth in Nigeria using annual data from 1986 to 2020. An ARDL model along with ECM has been applied. The short-run coefficients of ARDL shows that lnRGDP, lnFDI, lnREER, lnEXPT, lnINTR and lnUEP are statistically significant and are induced by their lags except of IMPT which is not statistically significant. For instance, the relationship between lnRGDP in the short run in the first and second lag has an endogenously positive impact on the dependent variable, but it is self-adjusting in the third lag respectively. Contrastingly, lnEXPT has a positive and significant impact on the dependent variable at 1% up to two lags. By implication, this means that appreciation in the total export has a positive economic impact on the growth performance of the Nigerian economy and it is induced by the lags effect. Consequently, lnFDI also reveals a correct sign with a positive and statistically significant impact on the performance of the Nigerian economy. The implication for this is that increase in the foreign direct investment in the economy can induce positive and significant benefits to the economic growth dynamics of the Nigerian economy by two lags.

On the other hand, lnIMPT can negatively affect economic performance when there is an increase in the imported goods and services in the economy. However, the lnIMPT is increasingly related to the economic performance, and it also affects the growth performance by up to two lags. The implication for this is that, increase in the import of goods and services has a negative effect on the economic performance of the Nigerian economy. lnINTR also reveals a positive and statistically insignificant impact in the first lag and negative impact on the performance of the Nigerian economy in the second lag. So also, lnREER indicate a negative and statistically significant impact on the dependent variable in the first lag while in second lag it depicted a positive and significant impact on Nigerian growth performance. Finally, lnUEP has negative and statistically significant impact on the dependent variable at all lags which implies the increase in unemployment rate will negatively affect the Nigerian economic growth. However, the error correction term in Table 4 revealed a correct sign with a value -0.1085 and a significant corresponding probability of 0.0179. Thus, the -0.1085 implies a 10% speed of adjustment to the equilibrium in the subsequent period. By implication, the system is capable of converging towards an equilibrium path after some shocks to the system. Therefore, for Nigerian economic growth performance to improve, it require at least 10% foreign direct investment share annually. As a result, the restoration to the equilibrium path will take at least ten years unless equilibrium agents (i.e., government and monetary authorities) implement active policies and favorable environment for foreign investors which will improve growth performance.

However, in the long run total export (lnEXPT) has positive and statistical influence on growth performance of Nigeria. Also foreign direct investment (lnFDI) has positive and statistically impact on Nigerian economy. The real effective exchange rate negatively affects economic performance. However, the import (lnIMPT) of goods and services negatively affects economic performance and is significant to induce any effect on the Economic growth of Nigeria. Finally, interest rate (lnINTR), real and effective exchange rate (lnREER) and unemployment (lnUEP) has negative effect on economic performance in the long run in respect to Nigerian economy as shown in Table 5.

Based on the findings of this research which provides new insights into new evidence on the impact of foreign direct investment and economic growth in Nigeria in various ways. Firstly, this study reveals that foreign direct investment has a positive influence on economic growth, thus showing the importance of adopting favorable policiesthat can attract lnFDI in the economy. Lastly, lnINTR, lnREER, lnIMPT and lnUEP have negative influence on economic growth. This reveals that for the Nigerian economy and lnFDI to improve, government need to tackle problems relating to financial system as well unemployment in order to benefit from foreign direct investment in Nigeria.

Therefore, this research recommends that policy makers must improve financial system or institutional quality in the country by introducing appropriate institutional reforms that can help and attract lnFDI. Furthermore, the financial sector should do more in creating awareness concerning the need to engage the use of financial services as well as embarking on the formal system of finance and not the other way. In addition, there should be a relaxation in the interest rate as well as effective exchange rate system which will encourage foreign and domestic small-scale investors that are willing to take credit for investments. Meanwhile, policymakers should make the business atmosphere conducive for the investors in terms of tax incentives and suchlike issues so that they can freely invest and be productive.

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