

## The role of institutions in the fdi-growth relationship in a developing economy: a new evidence from Nigeria

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### Abstract

*Following the need for studies on the role of institutions in the foreign direct investment-economic growth relationship in Nigeria and the attendant challenges post by the global pandemic caused by Covid-19, this study investigated whether institutional quality enhances this relationship over the period 1981 – 2018. The study used institutional data from Freedom House, and the autoregressive distributed lag (ARDL) modeling framework. The results show that the role of institutions in enhancing the FDI-growth relationship in Nigeria is significant, both in the long-run and in the short-run. The results also show that trade is an important driver of growth in Nigeria. Among others, the study recommends the evolution of strong institutional framework that can create the enabling environment for inflow of investments into the Nigerian economy. Such institutional framework should entrench respect for the rule of law, property rights, civil liberties, transparency and accountability in governance. Furthermore, there is need to evolve policies that will continue to mitigate the adverse effect of the Covid-19 pandemic since FDI inflows and growth figures have been globally affected by the pandemic.*

### Key words:

*Institutional Quality; Foreign Direct Investment; Economic Growth; ARDL Model*

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### Introduction

One incontrovertible fact in economic literature is that economic growth is one of the fundamental objectives of every economy. In other words, every economy seeks to grow. But economies do not just grow; they require effective policies and appropriate institutional frameworks to grow. According to Kazeem (2014), attempts at explaining the drivers of growth in various economies have generated an avalanche of reasons

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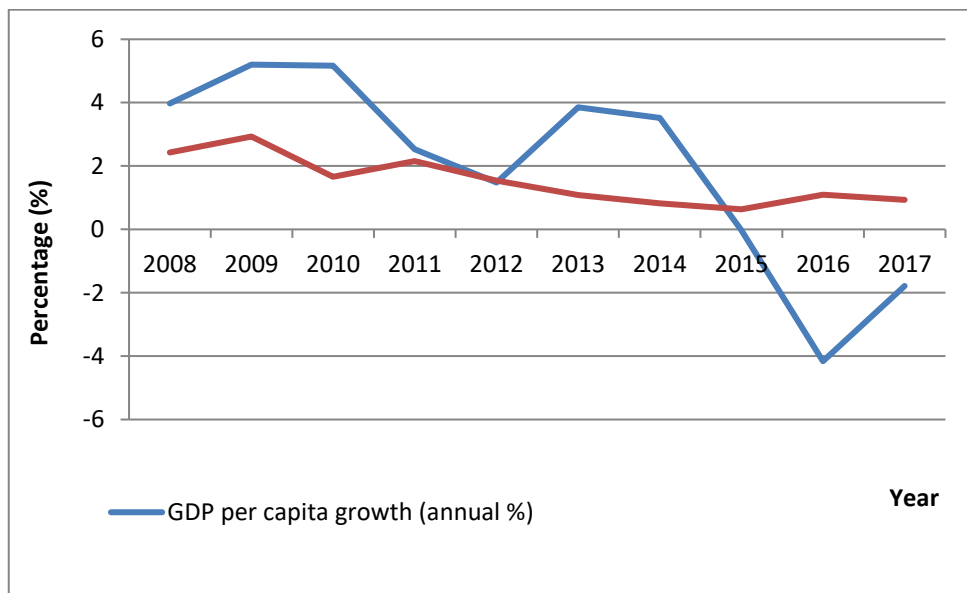
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such as economic, social, cultural, political and institutional factors. However, this study is particularly interested in the contribution of foreign direct investment (FDI) in Nigeria's growth process. This is consistent with some aspects of the extant literature, such as Peres, Ameer and Xu (2018), which have highlighted FDI not only as a key factor of globalization but also as an important stimulator of productivity enhancement, technological advancement, and job creation. Here, FDI is conceptualized as a direct investment in production or business in a country by an individual or company of another country, either by buying a company in the target country or by expanding operations of an existing business in that country (Adeleke, Olowe & Fasesin, 2014). Given the existence of some empirical studies on the FDI-growth relationship in developing countries, one may then wonder if this study is still necessary. Our response to such concern is that this study is very relevant at this time for several reasons. First, the underdeveloped nature of the Nigerian economy means that every effort aimed at increasing the pace and volume of FDI into the economy should be explored. This empirical evidence is one of such efforts which will provide evidence-based policy recommendations to drive the inflow of FDI into the Nigerian economy. Ugwuegbe, Okore and Onoh (2013) share this view. Second, the volume of FDI inflow into the Nigerian economy in recent years leaves so much to be desired when compared to other African economies. For instance, the inflow of FDI into Nigeria declined sharply to an 8-year low of \$981.7 million in 2017, while African countries like Egypt and Ghana recorded FDI inflow of \$7.4 billion and \$3 billion in 2017, respectively. In the same 2017, South Africa, which is the second largest economy in Africa after Nigeria, recorded \$150 billion FDI inflow. This shows that a lot of work needs to be done to enhance FDI inflow into Nigeria. According to Tokunbo (2018), Nigeria needs at least \$14 billion FDI inflow, but it has only obtained 7% of that requirement. This study contributes to the efforts towards driving FDI inflow to Nigeria.

Third, the decline in FDI inflow in Nigeria raises the important question about the role of institutions in the FDI-growth relationship in the country. Ozekhome (2017) pointed out that countries that have experienced rapid and sustained economic growth are those with sound institutional frameworks that sufficiently attract investment, technological innovation, and invariably make the business environment friendly for foreign investors. The quality of institutions in a country will go a long way in determining the willingness of foreigners to invest in the country. Countries with good institutional qualities are expected to attract more investors than others with poor institutions. Arshad (2016) noted that institutions and different institutional quality variables like corruption, rule of law, political rights, and civil liberties are consistently found to be significantly affecting economic growth. This view is supported by Rodrik (2007), which explained that good institutions are those institutions supporting economic growth in the best possible way. These institutions should be able to protect property rights, uphold the rule of law and rein in corruption, provide appropriate regulation and control market failure, support macroeconomic stability, and promote cohesion of social life of the society. Thus, the concept of institutional quality is of paramount importance in the FDI-growth nexus in Nigeria. Unfortunately, the extant literature has hardly paid any attention to the role of institutions in this relationship. This study fills this gap. Interestingly too, the recent challenges posed by the Covid-19 global pandemic has made it very pertinent to re-examine these issues and offer some economic policy prescriptions to guide policy makers in this post Covid-19 era in Nigeria and other similar economies.

The history of Nigeria’s FDI inflow can be traced back to the colonial era, when the colonial masters sought to exploit Nigeria’s abundant natural resources for the development of their economy (Adeleke, Olowe & Fasesin, 2014). The discovery of oil and coal in Nigeria among other natural resources attracted many investors from the globe, such as, the Shell Oil Company, Mobil, and Chevron. Following the Washington Consensus, the Nigerian government then privatized most of the government owned industries and corporation, thereby attracting more foreign investors into the country. Statistics from the World Development Indicators (WDI) published annually by the World Bank indicate that Nigeria recorded an average of 1.58% FDI net inflow to GDP from 1970-1979, and from 1980-1989, it declined to 0.73%. Even though this index rose to 5.79% in 1994, it has witnessed a continuous decline since then. Figure 1 plots these statistics for the decade ending 2017. Figure 1 also shows the poor performance of GDP per capita over the last decade. Inadequate infrastructural facility, poor business environment, and poor institutional quality, among others, may have contributed significantly to the fall in FDI inflow into the country, and this in turn may have fueled the poor output growth performance of the Nigerian economy in recent years. This paper therefore investigates the role of institutions in the FDI-growth relationship in Nigeria in order to provide evidence-based policies options that can drive FDI inflow and economic growth in the country. Specifically, the paper will: examine how FDI impacts on economic growth in Nigeria; examine how institutional quality impacts on economic growth in Nigeria; how institutional quality influences the impact of FDI on economic growth in Nigeria; and determine the direction of causality between FDI and economic growth in Nigeria.

**Figure 1:** FDI Inflow and GDP Per Capita Performance in Nigeria (2008 – 2017)



Source: Authors, with data from WDI (2018)

Figure 1 above also shows the poor performance of GDP per capita over the last decade. Inadequate infrastructural facility, poor business environment, and poor institutional quality, among others, may have contributed significantly to the fall in FDI inflow into the country, and this in turn may have fueled the poor output growth performance of the Nigerian economy in recent years.

Against this background, this paper therefore investigates the role of institutions in the FDI-growth relationship in Nigeria in order to provide evidence-based policies options that can drive FDI inflow and economic growth in the country. Specifically, the paper examines how FDI impacts on economic growth in Nigeria. It also examines how institutional quality impacts on economic growth in Nigeria; how institutional quality influences the impact of FDI on economic growth in Nigeria; and determines the direction of causality between FDI and economic growth in Nigeria.

## **1 An Overview Of The Literature**

Several theories of FDI abound in the literature, such as the internalization theory and the eclectic theory, among others. According to Dunning (2008), the internalization theory explains FDI as an organizational hierarchy, which internalizes the market for cross-border intermediate products. The theory is essentially directed to explaining why cross-border transactions of intermediate products are organized by hierarchies rather than determined by market forces, and why there is a strong presence of high-technology industries among multinational corporations. The notion of internalization implies that firms aspire to enhance their internal markets as soon as the cost of business activities within the firm becomes minimal. Thus, foreign firms are prompted to engage in FDI whenever they perceive that the net benefits of their common ownership of domestic and foreign activities, and the transactions arising from them, are likely to exceed those offered by external trading relationships. Thus when these foreign firms perceive the chances of higher profitability from affiliate firms, they become eager to make their investment decisions. Asogwa (2014) amplified this theory by pointing out that FDI takes place only if the benefits of exploiting firm-specific advantages outweigh the relative costs of the operations abroad.

The eclectic theory of Dunning (2008) encompasses various explanations of the activities of enterprises engaged in cross-border value-adding activities. The theorist emphasizes on the extent to which the parent firm possesses unique and sustainable ownership-specific advantages than firms of other nationalities in the production of a particular product or service for particular markets or groups of markets. The theory can be expressed in terms of ownership, location and internalization advantages. Ownership advantages refer to intangible assets possessed by the parent firm and may be transferred within transnational companies at low costs to bring about higher incomes or reduced costs. Such ownership advantages may be in the form of monopoly, technology and economies of scale. Location advantage refers to the business environment and business characteristics of the location in countries where the parent firms would operate or site their affiliate firms and it plays a major role in determining who will become host country for the activities of this parent enterprise (Hanson, 2001).

Theories of institutional quality can be classified into the old institutional theory, the methodological individualism, and the new institutional theory. According to Hodgson (1993), the 'old' institutionalism established the importance of institutions and proclaimed the need for a genuinely evolutionary economics. However, it proceeded in a more and more descriptive direction, leaving many of the core theoretical questions unanswered. Proponents of this theory believe that the neoclassical idea of the rational utility maximizing agent is inadequate and erroneous. Thus, this institutional theory does not take the individual as a constant variable; instead, individuals are shaped by institutional and cultural arrangements.

The theory of methodological individualism takes the individual, along with his or her assumed behavioural characteristics, as the elemental building block in the social or economic system (Hodgson, 1993). The theory emphasizes that in trying to understand the institutional features of a society, it is necessary to study the individual characteristics since the individual characteristics make up the society or institution. According to Agassi (1960), methodological individualism views the national interest, public policy, and similar expressions either as empty or as mere expressions that represent a fragment of many individuals' interests and policies. Thus, methodological individualism holds that subjective individuals' preferences explain the nature of institutions and social phenomena. The new institutional theory holds that informal and immaterial institutions (such as norms, beliefs, and routines) can better explain the relation between individual actors and organizations. Institutions must be seen as structuring forces that need to be maintained over time to preserve relevance. Institutions can reproduce action as actors fall back on previous experiences and react similarly or identically in similar situations. In this way, routines can lead to similar action despite conditions having changed. In addition, norms as moral elements have to be seen both as constraining or obligating and as enabling or awarding (Lang, 2018).

A large chunk of empirical studies have recently emerged in the literature dealing with the FDI-growth relationship in Nigeria and in other economies. However, the fact remains that the role of institutions in this relationship is yet to be comprehensively understood in Nigeria. This is the gap that this study seeks to fill. In what follows, we present the findings of some of these recent studies. Ozekhome (2017) investigated the impact of democratic institutions and foreign direct investment on economic growth in Nigeria, and found that democratic institutions and foreign direct investment have significant impact on the economic growth in Nigeria. The results also show that weak institutions have a destabilizing effect on economic growth, while the impact of FDI on the other hand was found to be positive and significant. Emmanuel (2016) also found that FDI impacts positively and significantly on economic growth in Nigeria. In a study of institutional quality and FDI in Nigeria, Esey and Yaroson (2014) established that political stability and corruption are major determinants of FDI inflows to Nigeria, while human capital and trade openness are also significant determinants of FDI inflow to Nigeria. Okonkwo, Egbunike and Udeh (2018) found that FDI increased Nigeria's exports in the period 1990 to 2012; while Akanegbu and Chizea (2017) established a positive relationship between FDI and output growth in the Nigerian economy. Izilien and Mohammed (2017) found that democratic institutions and FDI are significant variables for driving rapid economic growth in Nigeria. Both Aguda and Oladuja (2017) and Adeleke, Olowe and Fasesin (2014) found that FDI largely promotes economic growth, while Ona-

kayo (2012) found that even though FDI has a significant impact on output of the Nigerian economy, the growth effects of FDI differ across sectors. Other studies for Nigeria are Akinlabi, Hamed, and Awoniyi (2011) and Umoh, Jacob and Chuku (2012).

In other economies across the globe, the FDI-growth relationship has also been investigated. Some recent findings are presented here. Ochara, Onono and Meah (2016) found that in Kenya, FDI affects economic growth positively and institutional quality has a growth-enhancing effect on FDI. Hidayet, Emmanuel, and Abidin (2017) studied two groups of economies: a group of five rich natural resources and underdeveloped countries (DR Congo Ghana, Liberia, Zimbabwe, and Nigeria) and a group of five poor natural resources but developed countries (Denmark, Germany, Ireland, Finland and Switzerland). The findings show that institutional quality matter in the group of underdeveloped countries, whereas the group of developed countries was more concerned about political instability and government effectiveness. The findings show that all the indicators of institutional quality are averagely positive in the developed countries while the same indicators are negative in the underdeveloped group of countries. Najabat and Hamid (2017) found that FDI has a positive impact on the economic growth of Pakistan. Arshad (2016) explored the role of institutional quality on economic growth and more specifically the role it plays through foreign direct investment in a group of 106 countries. The results show that besides a strong direct positive effect on economic growth the aggregate institutional quality variable as well as all individual variables except for the rule of law have a small but significant indirect impact on economic that takes place through boosting FDI.

Tun, Azman-Saini and Law (2014) studied the importance of institutions for the growth-enhancing effect of FDI in a panel of 78 countries. The study used interaction term between FDI and institutional quality to capture this mediation effect. The findings revealed that the coefficient on FDI is statistically insignificant which implies that the impact of FDI on growth is transmitted through institutional quality and it has no direct impact on growth. Furthermore, the coefficient on institution was found to be positive and statistically significant at the 1% level. Thus, the study highlighted the complementary relationship between FDI and institutional quality, whereby the impact of FDI on growth actually depends on the quality of institutions in the host countries. Nguyen, Su, and Nguyen (2018) studied the impact of institutional quality on economic growth for 29 emerging economies using the System GMM estimators. The study found that the coefficient of the interaction between institutions and FDI was negative, while trade openness and FDI have the expected positive impacts on economic growth. Furthermore, the interactions between institutional quality and trade openness also have significant negative coefficients. Brahim and Rachdi (2014) studied the role which institutions play as regards the relationship that exists between FDI and economic growth in the MENA region. The major contribution of the study centered on the analysis of how institutional quality affects the FDI-economic growth nexus. The results show that the effect of FDI on economic growth was largely dependent on development of institutions in MENA countries such that only countries with good institutions can exploit the advantages of FDI on growth.

Overall, we find that the role of institutions in the FDI-growth nexus in Nigeria has largely remained unexamined. This study therefore contributes to the extant literature by investigating whether institutions have been enhancing or impeding the FDI-growth relationship in Nigeria.

## 2 Methodology

### 2.1 Theoretical Framework

The new growth theory indicates that growth of labour supply and growth of labour productivity are important factors in the economic growth process. Growth in labour productivity generally emanates from growth in human capital (i.e. accumulation of skills and knowledge), growth in investment (i.e. accumulation of physical capital), and technical progress (i.e. use of new and better production techniques). Following Tumwebaze and Ijjo (2015), we assume a Cobb-Douglas production function combining capital and labour with constant returns to scale so that aggregate output can be expressed as follows:

$$Y = AK^\alpha L^{1-\alpha} \quad (1)$$

where:  $Y$  = real economic output measured as real per capita GDP,  $A$  = technical progress,  $K$  = capital (measured in this study by gross fixed capital formation in constant US\$), and  $L$  = labour (measured by total adult population aged 15 – 64 years). The annual real per capita GDP growth is obtained from equation (1) as:

$$y = a + \alpha k + (1 - \alpha)l \quad (2)$$

where:  $a$ ,  $y$ ,  $k$  and  $l$  denote the growth rates of  $A$ ,  $Y$ ,  $K$  and  $L$ , respectively. By assuming non-diminishing returns to the accumulation of both human capital and physical capital, the new growth theory is able to predict the long-term growth effects of FDI. Indeed, the extant literature has identified FDI as an important driver of growth in various economies.

### 2.2 Model Specification:

To model the growth effect of FDI in Nigeria, we extend the economic growth function in (2) by including the FDI variable and other standard variables in growth regressions that are specific to the Nigerian economy on the right hand side of the equation. Thus, we include the following explanatory variables: foreign direct investment inflow ( $FDI_t$ ), trade openness measured as  $(Exports + Imports)/GDP$  (% of GDP) ( $TRADE_t$ ), nominal official exchange rate of local currency per U.S. dollar ( $EXCH_t$ ), and institutional quality ( $INST_t$ ). Even though these selected regressors are specific to the Nigerian economy, they are nonetheless consistent with some established studies in the literature such as Mankiw et al. (1992), Alexiou et al. (2014), and Tumwebaze and Ijjo (2015). The institutional quality variable used in this study is as defined in terms of political rights and civil liberties, which reflects perceptions of freedom to participate in the political process and rights to free expression, to organize or demonstrate, and to freedom of religion, education, travel, and other individual rights. The institutional quality data was taken from Freedom House, which monitors political freedom across the globe on an annual basis. The Freedom House institutional quality dummy variable takes the value of 2 for the classification free, 1 for partly free, and 0 for not free. Studies like Alexiou et al. (2014) and Ogbuabor et al. (2019) have used the Freedom House institutional quality data with great success. The period covered by this study is 1981 to

2018, based on data availability for the variables in the study. The entire data for this study is taken from the World Development Indicators published by the World Bank, except for the institutional quality variable, which was taken from Freedom House.

For the econometric analysis, we express the model for this study in its implicit form as follows:

$$PGDP_t = f(PGDP_{t-1}, K_t, L_t, FDI_t, TRADE_t, EXCH_t, INST_t) \quad (3)$$

where:  $PGDP_t$  is real per capita GDP growth;  $PGDP_{t-1}$  is the one lag of real per capita GDP growth; and  $t$  represents the time index. Furthermore, equation (3) is expressed as an ARDL model in its unrestricted ECM form as follows:

$$\begin{aligned} \Delta PGDP_t = & \beta_0 + \beta_1 PGDP_{t-1} + \beta_2 K_{t-1} + \beta_3 L_{t-1} + \beta_4 FDI_{t-1} + \beta_5 TRADE_{t-1} \\ & + \beta_6 EXCH_{t-1} + \beta_7 INST_{t-1} + \sum_{i=1}^p \lambda_i \Delta PGDP_{t-i} + \sum_{i=0}^q \alpha_i \Delta K_{t-i} + \sum_{i=0}^q \gamma_i \Delta L_{t-i} \\ & + \sum_{i=0}^q m_i \Delta FDI_{t-i} + \sum_{i=0}^q \psi_i \Delta TRADE_{t-i} + \sum_{i=0}^q \delta_i \Delta EXCH_{t-i} \\ & + \sum_{i=0}^q \phi_i \Delta INST_{t-i} + \varepsilon_t \end{aligned} \quad (4)$$

where:  $\beta_0$  is the constant term;  $\varepsilon_t$  is the stochastic error term; and all the variables are logged prior to estimation. In what follows, we provide some explanations on how each variable in equation (4) is expected to influence real per capita GDP growth.

In line with economic theory, the parameters of labour, capital, FDI and trade are expected to have positive signs since these variables are expected to engender growth, though some studies have established that FDI may not enhance growth sometimes (Iheonu, 2016). Some studies provide empirical support for expansionary effects of devaluations, but the contractionary effects have become more prominent in recent large number of studies, though mixed results and insignificant effect have also been reported by few studies (Razzaque et al., 2017). Thus, the parameter of exchange rate may be positive or negative. Some recent empirical studies in the literature have provided evidence suggesting a positive relationship between institutions that promote economic freedom and economic performance (Iheonu et al., 2017; Wanjuu and Le Roux, 2017); while other recent empirical studies have also documented that weak and poor institutional quality are growth retarding (Diop *et al.*, 2010; Ajide and Raheem, 2016). Hence, the coefficient of institutional quality is expected to be either positive or negative.



### 3 Results

The descriptive statistics of the variables in this study are shown in Table 1. The statistics indicate that all the variables show considerable levels of variation. All the variables follow the normal distribution, except for capital and FDI. More importantly, the variables do not show any case of outlier based on the mean, minimum and maximum values.

**Table 1:** Descriptive statistics of the variables

	CAPITAL	EXCH	FDI	INST	LABOR	PGDP	TRADE
Mean	56,500,000,000.00	88.54	1.76	0.84	66,796,959.00	1,758.61	32.26
Median	54,000,000,000.00	97.02	1.63	1.00	64,607,846.00	1,548.29	33.95
Maximum	105,000,000,000.00	306.08	5.79	2.00	105,000,000.00	2,563.90	53.28
Minimum	37,700,000,000.00	0.62	0.26	0.00	39,845,097.00	1,324.30	9.14
Std. Dev.	13,200,000,000.00	87.14	1.25	0.49	19,383,381.00	439.88	12.56
Skewness	1.49	0.80	1.32	(0.35)	0.33	0.66	(0.35)
Kurtosis	6.33	2.97	4.88	3.54	1.92	1.83	2.19
Jarque-Bera	31.74	4.08	16.64	1.25	2.53	4.89	1.83
Probability	-	0.13	0.00	0.53	0.28	0.09	0.40
Observations	38	38	38	38	38	38	38

Source: Authors, with data from WDI and Freedom House.

Table 2 reports the unit root test results for all the variables based on the Augmented Dickey-Fuller (ADF) test procedure. The results indicate that the variables are overwhelmingly integrated of order one. Interestingly, none of the variables is integrated of order two, which means that they have all satisfied the condition for inclusion in the ARDL model. The results however suggest that the variables may be cointegrated. This study therefore conducted ARDL bounds cointegration test, and the results are shown in Table 3.

**Table 2:** ADF Unit Root Test Results

Variables	ADF Stat at level	5% critical values	ADF stat at 1st Diff	5% critical values	Order of Integration
pgdp	-1.510514	-3.544284	-3.74212	-3.540328	I(1)
capital	-6.639963	-3.544284	-	-	I(0)
labor	-0.707503	-3.562882	-3.82059	-3.562882	I(1)
fdi	-2.304648	-3.536601	-10.9743	-3.540328	I(1)
trade	-1.984335	-3.536601	-7.26054	-3.540328	I(1)
exch	-1.282763	-3.536601	-5.52571	-3.540328	I(1)
inst	-4.002047	-3.536601	-	-	I(0)

Source: Author

The results in Table 3 indicate that the value of the test statistic is greater than all the upper bounds, even at the 1% level. This shows that the variables are cointegrated, that is, they have a stable long-run relationship. This study therefore proceeded to investigate the long-run relationship between the variables. The results are shown in Table 4.

**Table 3:** ARDL Bounds Cointegration Test

Test statistic	Value	K	Level of Significance	Critical Value Bounds	
				I(0)	I(1)
F-statistic	9.379184	7	10%	2.72	3.77
	9.379184	7	5%	3.23	4.35
	9.379184	7	1%	4.29	5.61

Source: Authors' computation

**Table 4:** Long-run regression results, ARDL (1,1,0,1,0,0,0,0)

Variable	Dependent Variable = PGDP			
	Coefficient	Std. Error	t-Statistic	P-value
C	6.7969	1.9123	3.5543	***0.0017
PGDP(-1)	0.9623	0.0599	16.0732	***0.0000
CAPITAL(-1)	-0.1834	0.0467	-3.9266	***0.0007
LABOR	0.1270	0.1153	1.1012	0.2822
TRADE(-1)	0.0717	0.0200	3.5827	***0.0016
INST	-0.0782	0.0248	-3.1547	***0.0044
FDI	-0.0817	0.0175	-4.6752	***0.0001
INST*FDI	0.0853	0.0193	4.4246	***0.0002
EXCH	0.0195	0.0147	1.3277	0.1973
R-squared	0.9934			
Adj. R-squared	0.9900			
F-statistic	290.5642			
Prob(F-stat)	0.0000			
DW stat	2.2072			

Source: Authors' Computation from Eview. Note: \*\*\* denotes significant at 1% level

The results in Table 4 are quite interesting. We find that both FDI and institutional quality impact negatively and significantly on economic growth in Nigeria. But when the two regressors are interacted in the model, we find that institutional quality plays positive and significant role in enhancing the influence of FDI on economic growth in Nigeria. This shows that institutional quality is important in explaining the role of FDI as a driver of growth in Nigeria. These findings are contrary Nguyen, Su, and Nguyen (2018), which found that the interaction between institutions and FDI was negative among 29 emerging economies. The results are however consistent with Tun, Azman-Saini and Law (2014), which found that the impact of FDI on growth is transmitted through institutional

quality, suggesting the existence of complementary relationship between FDI and institutional quality. The results of this study are also consistent with Brahim and Rachdi (2014), which showed that the effect of FDI on economic growth was largely dependent on development of institutions so that only countries with good institutions can exploit the advantages of FDI on growth.

The results further show that trade is an important driver of growth in Nigeria, while the roles of labour and exchange rate remained muted. This is consistent with the trade-led growth hypothesis, which emphasized the role of trade in the economic growth process. The impact of capital is negative, suggesting that more efforts are needed in mobilizing capital for the real sectors of the economy. However, the immediate past level of growth was found to be an important contributor to economic growth in Nigeria. Thus, efforts should be intensified towards achieving sustainable economic growth in Nigeria. The above results are consistent with the short-run estimates shown in Table 5. The results show that the coefficient of interacting institutional quality and FDI is positive and significant, even at the 1% level. This reaffirms the long-run results, which showed that the positive impact of FDI on economic growth in Nigeria is transmitted through developments in institutions.

The diagnostic checks on the results are reported in Table 6. These checks indicate that the problems of autocorrelation and heteroskedasticity are absent from the model. The checks also indicate that the residual is normally distributed as expected, while the cumulative sum (CUSUM) test and cumulative sum (CUSUM) of squares test indicate that the model is stable. Overall, we find that the model for this study meets the criteria for policy formulation.

**Table 5:** ARDL-ECM result - ARDL (1,1,1,0,1,0,1,0,0,1)

Variable	Dependent Variable = D(PGDP)			
	Coefficient	Std. Error	t-Statistic	P-value
C	0.1626	0.0743	2.1894	**0.0400
D(PGDP(-1))	0.9245	0.1534	6.0267	***0.0000
D(CAPITAL)	-0.1338	0.0368	-3.6404	***0.0015
D(LABOR)	-0.0462	3.4321	-0.0135	0.9894
D(TRADE)	0.0590	0.0146	4.0344	***0.0006
D(INST)	-0.0494	0.0143	-3.4602	***0.0023
D(FDI)	-0.0592	0.0137	-4.3263	***0.0003
D(INST*FDI)	0.0564	0.0164	3.4480	***0.0024
D(EXCH)	-0.0042	0.0136	-0.3113	0.7586
ECM(-1)	-1.1054	0.2511	-4.4026	***0.0002
R-squared	0.8057			
Adj. R-squared	0.6855			
F-statistic	6.7003			
Prob(F-stat)	0.0001			
DW stat	1.5870			

Source: Authors. Notes: \*\*\* and \*\* denote significance at 1% and 5% levels, respectively.

**Table 6:** Diagnostic Checks on the Long-Run Results

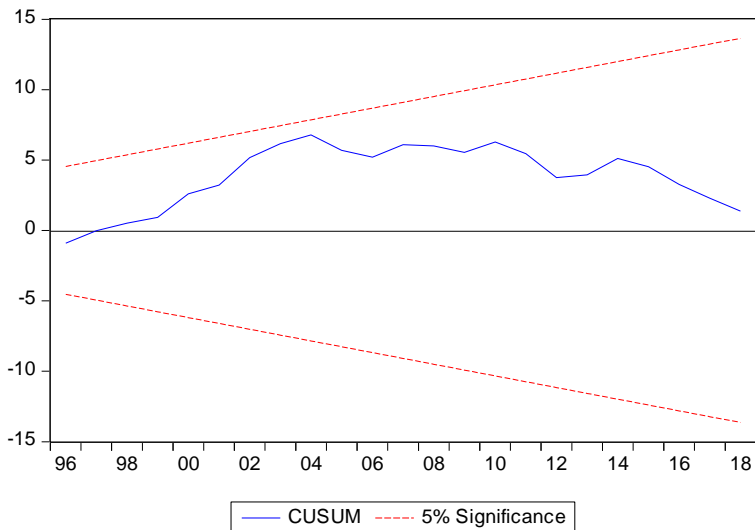
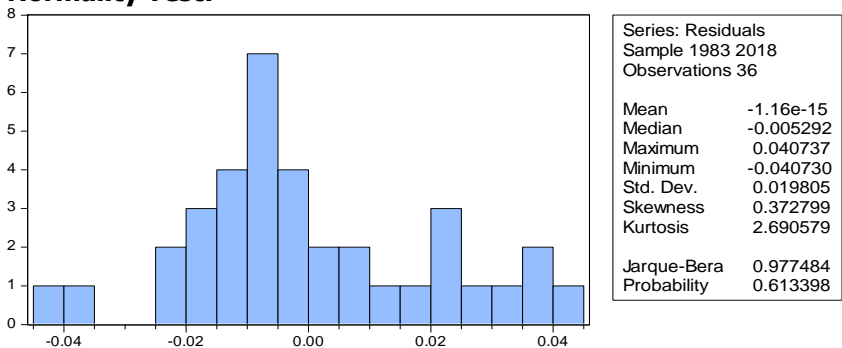
**Breusch-Godfrey Serial Correlation LM Test:**

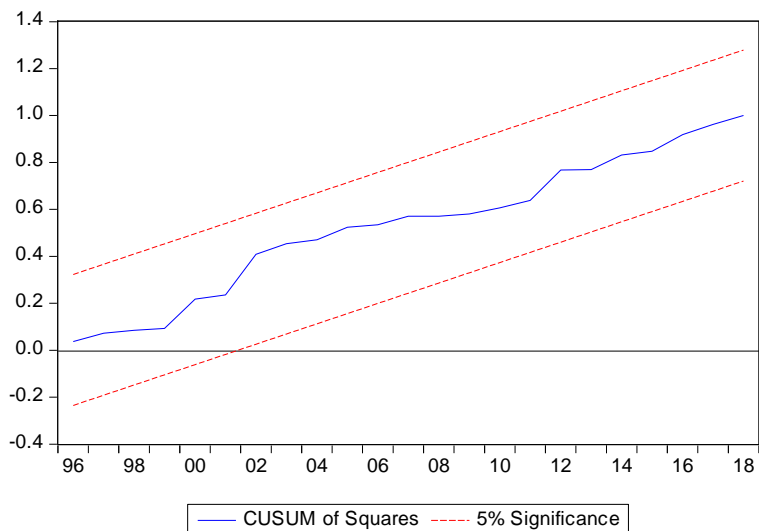
F-statistic	0.707821	Prob. F(2,21)	0.5041
Obs*R-squared	2.273550	Prob. Chi-Square(2)	0.3209

**Heteroskedasticity Test: Breusch-Pagan-Godfrey**

F-statistic	0.453352	Prob. F(12,23)	0.9219
Obs*R-squared	6.886311	Prob. Chi-Square(12)	0.8650
Scaled explained SS	2.375980	Prob. Chi-Square(12)	0.9986

**Normality Test:**





Source: Authors

### Conclusions and Policy Implications for a Post Covid-19 Nigeria

Following the dearth of studies on the role of institutions in the FDI-growth nexus in Nigeria, and the attendant challenges posed by the Covid-19 pandemic, this study investigated whether institutional quality enhances this relationship or otherwise. The results show that the role of institutions in enhancing the FDI-growth relationship in Nigeria is significant, both in the long-run and in the short-run. The results also show that trade is an important driver of growth in Nigeria; however, the roles of labour and exchange rate remained muted all through. An important policy implication of these findings is the need for government to evolve strong institutions that can create the enabling environment for investment, which will then drive growth in the economy. This means that policymakers and governments across the country should lead the way in entrenching sound institutional framework in terms respect for the rule of law, property rights, civil liberties, transparency and accountability in governance. These will in turn ensure that the domestic environment is devoid of corruption and lack of accountability in governance. Thus, the drive for more FDI inflow into the Nigerian economy will largely remain a pipe dream if the efforts of the government in this regard are not supported by strong institutional framework. Another policy implication of this study comes from the significant role of trade as a driver of growth in the economy. This means that policymakers and governments should work towards export diversification in order to take advantage of trade to grow the economy. Again, the negative roles of labour (in the short-term) and capital (in both the short- and long-term) calls for increased investment in human capital development and in domestic resource mobilization. Furthermore, there is need to evolve policies that will continue to mitigate the adverse effect of the Covid-19 pandemic since FDI inflows and growth figures have been globally affected by the pandemic.

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