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Impact of Ease of Doing Business on Foreign Direct Investment in Nigeria

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ABSTRACT

The principal purpose of this study was to unravel the effect of ease of doing business on foreign direct investment in Nigerian from 1980 to 2020. To achieve these goals, detailed analysis of ease of doing business on foreign direct investment was carried out. The ARDL and Bounds Testing Approach were used to investigate the long run and short-run relationship between the variables. The result shows that ease of doing business in terms of access to electricity is a significant predictor of foreign direct investment up to the second period lag in the short run and in the long run as well. This implies that more investment is needed in power sector to further enhance energy generation and distribution in the country All other variables, however, seem not to be statistically significant in the long run. Furthermore, we found out that the variables are statistically significant in the short run with the exception of the initial and first period lag of gross domestic product, and the second period lag of access to electricity. The study recommended among others that there should be optimal control of trade through the borders of the economy. In this way, all cross-border economic activities are accounted for. Governments should be intentional about achieving better ease of doing business score and make targeted and reformed policies to this end. One of these ways is by reducing and simplifying procedures involved in registration, setting up a business, tax, licenses, and other matters that borders around businesses.

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Introduction

Foreign Direct Investment over the decades has empirically proven to be a major source of external capital and an important factor that contributes to the economic growth and development [1-4]. Several factors such as market size, human capital development, Ease of Doing Business and Financial Development are essential for attracting FDI into a country. The state of some of these factors play a huge role in determining the destination of FDI. When they are good and favourable, they tend to attract more FDIs, and the reverse is the case should there be on the negative side. A comparative study by the United Nations shows that Africa has witnessed a total FDI of $49.5 billion between 2010 and 2019, while its counterparts; South America, North America, Asia, and Europe has witnessed an FDI inflow of $167.1 bn, $485.7 bn, $493.7bn, and $529.7bn respectively [5]. Given the potential of FDI to contribute to economic growth, government everywhere strive to design policies to improve their investment climate to attract these much-needed resources for development [6].

As previously mentioned, Africa has fallen behind in comparison to other regions in terms of attracting foreign direct investment (FDI) and Nigeria is no exception. The trade policies of Nigeria aim to enhance competitiveness of domestic industries and promote local value-added production as well as diversify exports. This can only be achieved when local industries thrive, but much cannot be said about them.

The World Bank's Doing Business survey involves ranking countries according to the ease of doing business as potential hosts for FDI. The Ease of Doing Business index provides a quantitative measure of regulations affecting various stages of the life of a business. Small and medium enterprises compose the bulk of these businesses [7]. Economies are ranked on their ease of doing business from 1 – 190 determined by 10 subsidiaries. Put simply, a cumulation of all the activities that affects business outcomes can be summed in what is known as Ease of Doing Business. A country's position on the ease of doing business ranking can fluctuate depending on the regulations and framework that govern the process of starting and running a business within the country. While some nations may have a more favorable business climate, others may have more obstacles, which can impact the development of entrepreneurship in those countries. In general, fewer or less complex regulations tend to result in a higher ranking, but this can come at a cost based on the country's regulatory environment. Protecting the rights of creditors and investors, as well as setting up or improving property and credit registries, may require additional regulations [8]. It is important to note that the Ease of Doing Business Index is not a measure of a country's overall economic performance, but rather a measure of the regulatory environment for businesses.

Nigeria appears to be one of the good locations for business on paper. But it is blatantly clear how unfounded this is. Given her abundance of natural, mineral, and human resources, Nigeria has the potential to become the most developed and eminent nation in Africa—the next Silicon Valley. Such advancement has been thwarted by a litany of persistently bad policies and egregious

resource mismanagement. According to Infoguidenigeria, a large majority of newly established small and medium-sized businesses in the country have a difficult time staying afloat past the three-year mark. As a result, many foreign investors and business owners have decided to withdraw their investments and move their operations elsewhere [9].

To enhance the business environment and attract more investments, various organizations, boards, and committees have been set up in Nigeria. As an example, the Nigerian Investment Promotion Commission (NIPC) was found in 2004 with the purpose of supporting, promoting and organizing investments within the Nigerian economy. This commission houses 27 Government agencies such as Corporate Affairs Commission (CAC), Nigerian Export Promotion Council (NEPC), Oil & Gas Free Trade Zones Authority (OGTZ), among others, and assists with investment-related processes, streamlining the process of obtaining necessary approvals and permits, and providing guidance on information and compliance from the establishment of a business to its growth. Similarly in July 2016, The Presidential Enabling Business Environment Council (PEBEC) was set up with the aims of eliminating bureaucratic obstacles for conducting business in Nigeria, making the country a more favorable place to establish and expand a business. These changes have led to a gradual enhancement of the investment environment in Nigeria, as reflected in the improvement in the country's ease of doing business ranking from 146 in 2018 to 131 in 2019.

Challenges Facing Businesses in Nigeria

Several country-specific challenges hinder the ease of doing business globally, here are some prevalent in Nigeria.

The electricity infrastructure is one of the most evident issues. Nigeria, despite its massive population, generates less energy than is necessary. This raises the cost of conducting business because practically every industry in this country is dependent on a consistent electricity supply. Businesses, on the other hand, seek alternate power sources such as generators and solar plants, which are expensive to run.

Safety is also a concern, as many Nigerians have become accustomed to dealing with the country's prevalent issues such as kidnappings, domestic terrorism, theft, planned robberies, and communal violence. Business owners and organizations are therefore compelled to invest more money on security measures. Although this raises the running expenses for businesses, it does not guarantee that they will be impervious to economic downturns. This makes doing business very difficult.

At the center of it all lies widespread corruption, which affects every sphere of the economy. This can manifest as organizations asking for more money in exchange for cutting shortcuts, government officials by-passing due process for some people in exchange for personal gain or paying security firms more money to assist you in solving a problem. However, this is not just restricted to the government and its departments; individuals and corporations also engage in corrupt behavior in the form of rent-seeking, exorbitant price increases brought on by hoarding, etc. Also, corruption persists severely in infrastructure development projects as government allocates contracts without merit, despite various federal and state government reforms.

Additionally, the process of obtaining licenses and permits is very difficult. The hardest part of starting and operating a business is getting all the paperwork required and navigating the regulatory environment, which is complex and opaque. These rules are designed to keep businesses in check and guarantee that they adhere to a set of rules. One of the factors contributing to a country's low ranking in the World Bank's "Doing Business" rankings is the extensive regulatory requirements. The number of businesses that finish this process cycle is lower than the number of businesses that begin it, which makes doing business in Nigeria very difficult.

Furthermore, for any entrepreneur who wants to launch their very own small business must scale the herculean task of raising finance as this is never easy and frequently calls for a lot of perseverance and patience. When it comes to conducting business in Nigeria, a lack of finance is the single biggest obstacle. The government has traditionally struggled to make sure that financial capital is readily available to entrepreneurs, even with the formulation and implementation of financial programs meant to support entrepreneurs through Bank of Industry and Bank of Agriculture. Due to corruption, the majority of funds frequently escape detection and never reach their intended recipients. As a result, entrepreneurs typically must depend to their own resources, company loans, relatives and friends, or government grants.

Empirical Literature

Nadine et al, employs the basic FDI gravity model as well as the augmented FDI gravity model using the data collected for forty-two source countries over the period 2005-2019 [10]. While using a Generalized Method of Moments (GMM) estimation approach, this research intends to provide better understanding of the impact of relative ERV on inward FDI to Egypt as well as investigating the impact of other relative dimensions on inward FDI to Egypt from these source countries. Results revealed that relative exchange rate volatility has a negative impact on inward FDI to Egypt. It has also been conducted that market size of home countries and host country exert a significant positive impact on inward FDI to Egypt. Geographic distance, bilateral trade, relative cost of borrowing, relative labor productivity, and relative corruption are found to be statistically significant for inward FDI to Egypt.

Rosetta & Abdu conducted a study examining the correlation between ease of doing business and foreign direct investment by analyzing 5 years' worth of cross-sectional data from countries in Sub-Sahara Africa and Asia [11]. The findings of their study provided some support for the idea that there is a relationship between the overall index of ease of doing business and FDI. Additionally, their results indicated that there was a positive correlation between these two factors for the combined sample of years 2000 and 2001 and for Sub-Sahara Africa countries between 2001 and 2005. However, no correlation was found between FDI and ease of doing business for Asian countries in any of the years between 2000 and 2005.

In the same vein, Asiedu demonstrated that while high returns on investment and improved infrastructure tend to attract more foreign direct investment in countries outside of Sub-Saharan Africa, these factors alone do not lead to a significant increase in FDI in SSA nations [12].

Adrian & Robert studied the connection between the ease of conducting business and foreign direct investment (FDI) and discovered that the ease of doing business significantly predicts FDI. However, this connection only holds true for countries with middle incomes, and there is no such correlation in Sub-Saharan Africa or among OECD countries. Additionally, they found no

evidence to suggest that a country's FDI is affected by the ease of doing business in neighboring countries.

Lawless examine the ease of doing business with respect to tax complexities and their result show that the tax complexity components of doing business have a significant effect on the existence of FDI but have minor impact on the level of the FDI flow [13].

Similarly, Jayasuriya establishes in his work that higher Doing Business rankings draw more FDI. However, they offer some proof that while some indicators are significant, others are not [14]. Their paper also shows that, on the average, nations that carry out extensive changes in comparison to other nations do not automatically draw in more foreign direct investment.

Piwonski demonstrates that a government can attract more than $44 million USD in FDI by raising their nation's Ease of Doing Business ranking one level [15].

Nnadozie & Njuguna conducted research to investigate the connection between foreign direct investment (FDI) and the business regulations and investment climate in Africa [6]. Through their analysis, they found that business regulations play a vital role in attracting FDI, as indicated by their regression analysis that included business regulations as a variable.

Bayraktar from the results of his study of the Changing relationship between ease of doing business and FDI for the period of 2004 to 2010, show that countries which have better records of "doing business" tend to attract more FDI. However, the share of developing countries in FDI inflows is increasing consistently, while it is dropping for developed countries [16]. He attributed this to the difference in growth rates of the two categories. He posits further that higher FDI flows to developing economies may be explained in part by the improved performance in "ease of doing business" metrics in these nations.

Asiedu examined FDI from a different standpoint of the literature reviewed [2]. She assessed the nature of relationship between natural resources, market size, government policies, political instability, institutional quality with FDI. Her finding show that all the variables are highly significant predictors of FDI. This demonstrates that small, resource-poor nations may nonetheless draw in foreign direct investment through a variety of channels, such as their political atmosphere, institutions, and regulatory frameworks.

While there is empirical evidence that the ease of doing business is a significant predictor of FDI, some authors still argue that singular investor incentives, including tax breaks, typically don't help the overall investment climate unless they are properly paired with other incentives. The general business climate must be favorable for special incentives to be meaningful for an investment choice [3].

Athukorala noted that when vying for foreign direct investment, governments typically provide a strong incentive plan to persuade multinational enterprise to locate their affiliates in their respective countries. Such packages are usually offset by comparable ones provided by rival nations [17]. The analysis concluded that investment incentives only matter when other factors are similar amongst the prospective host nations.

Hossain et al investigates the impact of Ease of Doing Business on Inward FDI over the period from 2011 to 2015, drawing a sample from 177 countries across the globe from 190 countries listed in World Bank [18]. They measured Ease of Doing Business using 5 of its indicators; starting a business, getting credit, registering property, paying taxes and enforcing contracts. Their result shows that 'Enforcing Contracts' have a positive significant impact on Inward FDI, with 'Getting Credit' and 'Registering Property' having a negative significant impact on Inward FDI. On the other hand, 'Starting a Business' and 'Paying Taxes' have no significant impact on Inward FDI.

Corcoran & Gillanders examined the effect that a country's business regulatory environment has on the amount of foreign direct investment it attracts [19]. They used the World Bank's Ease of Doing Business ranking to capture the costs that firms face when operating in a country. Their result show that the Doing Business rank is highly significant when included in a standard empirical foreign direct investment (FDI) model, and this significance is driven by the Ease of Trading Across Borders component. They also discovered that the relationship is significant for middle income countries, but not for the World's poorest region, Sub Saharan Africa, or for the OECD. Lastly, their results reveal that there is no evidence that the ease of doing business of nearby countries influences the FDI that a country gets in general.

Nketiah-Amponsah & Sarpong pries into the empirical relationship between selected ease-of-doing-business indicators and foreign direct investment in sub-Saharan Africa [20]. Using a panel of 45 sub-Saharan African countries covering the period 2004–2018 and the system generalized method of moments estimation technique, their result reveals that ease-of-doing-business indicators play a significant role in attracting foreign direct investment to the sub-region.

In practice, the conclusions about the interactions between EoDB, and FDI have not been consistent. When looked at separately, there is no obvious pattern to indicate that the various EoDB dimensions have an impact on FDI. There seem to be divergent views on whether an overall EoDB ranking has a substantial impact on FDI.

There have been several research works on EoDB and its effect on Investments. However, there have been very few contributions or research that particularly concerns access to electricity and Finance relative to EoDB as most research studies focuses on regions and EoDB cumulative index. Furthermore, after reviewing some of these studies, it was discovered that there have been conflicting results across the studies. In as much as several studies have been carried out, there is still a need to validate previous studies to ascertain the exact impact of EoDB on FDI in Nigeria. Therefore, this study seeks to explore the impact of Ease of Doing Business on Foreign Direct Investment in Nigeria using time series data for a period of 1981 to 2020.

Theoretical Framework

Internalization Theory

The Buckley and Casson model, created in 1976 and later modified by Hennart in 1982, explains the reasons behind the growth of international companies and the motivations behind their foreign direct investments. The theory suggests that these companies structure their internal operations to gain specific advantages.

Hymer in his doctoral dissertation identified two key factors that influence foreign direct investment: the elimination of competition and the presence of certain advantages held by certain companies [21]. Zaheer noted that when internalization leads to foreign investment, companies may face political and commercial

challenges because of their lack of familiarity with the foreign environment, known as the "costs of doing business abroad" stemming from the "liability of foreignness." When these costs are high, companies may choose to license or outsource production to another company or produce domestically and export to the foreign country instead [22].

Eclectic Paradigm of Dunning (ILO THEORY)
Dunning in 1979 created the eclectic theory, which combines three different theories of foreign direct investment.

Ownership Advantage ('O'): The first theory is ownership advantages, which refers to the possession of intangible assets that are unique to a company and can be used to lower costs or increase profits in a foreign country. Examples of these assets include monopolistic powers, technological advancements, and cost savings from large-scale operations.

Location ('L'): The locational differences between countries gives certain advantages and is the key factor which determines who will become the host country for the activities of the international company. However, this is based on economic benefits, political advantages, and social advantages.

Internalization ('I'): Internalization is a framework that examines the different methods that international companies use to capitalize on their ability to sell goods and services internationally. As the advantages of cross-border market internalization increase, companies will increasingly seek to produce goods and services abroad. Overall, this theory suggests that the criteria used by companies to evaluate potential host countries vary and are influenced by the economic, political, and social factors of the host country. Thus, a company's objectives and strategies, as well as the scale and scope of its production, are heavily influenced by the opportunities and challenges presented by different countries.

International Product Life Cycle (IPLC) Theory
The production cycle theory of FDI, developed by Raymond Vernon in the 1990s, focuses on the foreign direct investments made by American companies in Europe after World War II. The theory posits that FDI goes through four phases: innovation, expansion, maturity, and reduction. It explains that as a firm's product moves through these phases, it may shift from exporting to investing directly in foreign production in order to maintain its competitive advantage. Specifically, the theory suggests that FDI is more likely to occur in the maturity and decline stages of the product life cycle, as firms seek to retain their market position by producing abroad. Additionally, the theory posits that other firms from the home country may also invest in the same foreign market, creating an oligopolistic market with both trade and FDI.

The theory of exchange rate on defective capital markets also tries to explain FDI. Cushman investigated the effect of exchange rates on FDI [23]. He established that real exchange rate increase encourages foreign direct investment. On the other hand, appreciation of foreign currency negatively affects FDI. He concludes that foreign exchange rate can only affect FDI if one currency is involved, for example, the U.S. dollar. This means that the theory of exchange rate cannot explain FDI between economies when different currencies are involved.

Ease of Doing Business Index
Simeon Djankov, Michael Klein and Caralee McLiesh, three leading economists at the World Bank Group, jointly created ease of doing business index in 2002. The basis of the research behind ease of doing business, analyses how to build effective institutions. In other words, it understands what drives institutional change, the importance of history, highlighting the need to ensure effective institutions through a design that complements existing institutions, human capabilities and available technologies. The ease of doing business index was meant to measure regulations directly affecting businesses and did not directly measure more general conditions such as a nation's proximity to large markets, quality of infrastructure, inflation or crime.

A nation's ranking on the index was based on an average of 10 sub-indices:
1. Starting a business
2. Dealing with construction permit
3. Getting electricity
4. Registering property
5. Getting credit
6. Protecting investors
7. Paying taxes
8. Trading across borders
9. Enforcing contracts
10. Resolving insolvency

Methodology
This study examines the relationship between Ease of Doing Business and Foreign Direct Investment (Net Inflow) in Nigeria spanning the period of 1980 and 2020. Annual time series data are obtained from Central Bank of Nigeria (CBN) Statistical Bulletin, 2021 and World Development Indicators 2021 to examine this relationship. In general, non-stationary data cannot be predicted or modelled since they are unexpected. In that they could suggest a link between two variables where none exists, the conclusions drawn from the use of non-stationary time series may be misleading. It is necessary to convert the non-stationary data into stationary data in order to obtain repeatable, dependable findings. As the estimate of time series data may result in an erroneous regression that has a high R-square and high t-ratios but no true correlations. The Augmented Dickey Fuller test is used to determine the data series' stationarity for this purpose. The ARDL approach is used given that it is suitable for either single or mixed order of integration, and small sample size. In addition, the connection between the long-run and short-run is determined using the Bound test. Breusch Godfrey serial correlation LM test and CUSUM test are also used to check for serial correlation and stability of the model.

Model Specification and Description of the Variable
Foreign direct investment, which is the dependent variables, is measured as a percentage of GDP. For Ease of doing business, two of the indicators (Getting electricity and Getting Credit) were selected. To capture these variables, access to electricity expressed as a percentage of population and domestic credit to private sector by banks measured as a percentage of GDP were used as proxy and were both sourced from World Development Indicators. Both variables are expected to exert a positive influence on FDI. Exchange rate is sourced from CBN Stat. Bulletin 2021 and we anticipate that this variable will have a positive impact on FDI following Cushman's theory of exchange [23]. This holds only on the condition that only one single currency is under consideration. Market size is one of the important predictors of trade and no doubt, affects FDI. This was introduced in the model using real gross domestic product. It is however expected to exert a positive impact on FDI as market structure is instrumental to trade and investments at large.

Our model is specified thus:

$$FDI=f(ATE,CPS,lnGDP,EXC) \quad (1)$$

$$FDI=\beta_0+\beta_1 ATE+\beta_2 CPS+\beta_3 GDP+\beta_4 EXC + \cup \quad (2)$$

Where: lnFDI is the natural logarithm of foreign direct investment; lnATE is the natural logarithm of access to electricity; lnCPS is the natural logarithm of credit to private sector by banks; lnGDP is the natural logarithm of gross domestic product; lnGDP is the natural logarithm of exchange rate. β0 is the intercept, and β1 to β10 are the slope coefficients.

The autoregressive-distributed lag (ARDL) technique to cointegration is used to capture the interactions of these variables and specified as follows:

$$\Delta \ln FDI_t = \beta_0 + \sum_{i=1}^{n} \beta_{1i} \Delta \ln FDI_{t-1} + \sum_{i=0}^{n} \beta_{2i} \Delta \ln ATE_{t-i} + \sum_{i=0}^{n} \beta_{3i} \Delta \ln CPS_{t-i} + \sum_{i=0}^{n} \beta_{4i} \Delta \ln GDP_{t-i} + \sum_{i=0}^{n} \beta_{5i} \Delta \ln EXC_{t-i} + \beta_6 \ln FDI_{t-1} + \beta_7 \ln ATE_{t-1} + \beta_8 \ln CPS_{t-1} + \beta_9 \ln GDP_{t-1} + \beta_{10} \ln EXC_{t-1} + \varepsilon_t \quad (3)$$

Where:

Pesaran et al [24]. established the upper and lower critical limits for assessing the null hypothesis that there is no cointegration among variables. When the computed F-statistic is compared to the critical bounds, the null hypothesis is rejected if the calculated F-statistic is greater than the upper critical bound, accepted if it is less than the lower bound, and deemed inconclusive if the calculated F-statistic falls between the lower and upper critical bounds.

The error correction model for the estimation of the short-run relationships is specified as:

$$\Delta \ln FDI_t = \beta_0 + \sum_{i=1}^{n} \beta_{1i} \Delta \ln FDI_{t-1} + \sum_{i=0}^{n} \beta_{2i} \Delta \ln ATE_{t-i} + \sum_{i=0}^{n} \beta_{3i} \Delta \ln CPS_{t-i} + \sum_{i=0}^{n} \beta_{4i} \Delta \ln GDP_{t-i} + \sum_{i=0}^{n} \beta_{5i} \Delta \ln EXC_{t-i} + \lambda ECM_{t-1} + \varepsilon_t \quad (4)$$

Where (λ) the coefficient of the error correction term ECMt-1 is expected to be negative and significant to show that short-run disequilibrium will converge back to the established long-run relationship.

Empirical Results

Unit Root Test

The first step of this empirical investigation is to examine the stationarity of the variables using unit root tests. This is important because ARDL model does not allow variables that are integrated of order 2 i.e. I (2).

Table 4.1: Stationarity Test

Variables	ADF Stat. at Levels	5% Critical Value	ADF Stat at First Difference	5% Critical Value	Order of Integration
lnATE	-6.059264	-3.568379			I (0)
lnCPS	-3.572495	-3.574244	-4.903815	-3.587527	I (1)
lnEXC	-0.328059	-3.568379	-4.099545	-3.574244	I (1)
lnFDI	-2.986991	-3.587527	-5.085807	-3.580623	I (1)
lnGDP	-2.288175	-3.574244	-6.247088	-3.595026	I (1)

Source: Authors' computation, EViews 10

The test results show that apart from ATE that is stationary at the level, the other variables are only stationary at first difference given the 5% level of significance. With the test results showing that the variables are integrated of a mixed order of I (0) and I(1), ARDL remains a reliable econometric technique for this empirical analysis. Having ensured that the variables are in appropriate order of integration we proceed to check for long run or short run equilibrium relationship among the variables using the bound test.

Cointegration

Having established that the variables are of mixed order of integration, we proceed with the Autoregressive Distributive Lag (ARDL) bounds co-integration test.

Table 4.2: ARDL bound test result for cointegration

F-Bounds Test	Null Hypothesis: No levels relationship			
Test Statistic	Value	Signif.	I(0)	I(1)
			Asymptotic: n=1000	
F-statistic	9.316531	10%	2.45	3.52
k	4	5%	2.86	4.01
		2.5%	3.25	4.49
		1%	3.74	5.06

Source: Authors' computation, EViews 10

Table 4.2 above shows the results of the ARDL bound tests for demonstrating the long-run relationship among the variables using the Akaike Information Criterion (AIC) to automatically determine the lag duration. F-statistics at k = 4 were used to test the hypothesis against the critical bound values at various significance levels. The result shows that the F-statistic value of 7.34633 is greater than the upper bound values for 1%, 2.5%, 5% and 10% respectively; we therefore reject the null hypothesis and conclude that there is a long run equilibrium relationship between the estimated variables.

Long-Run and Short-Run Model Estimation

After establishing the existence of the co-integrating relationship among the variables, we proceed to the estimation of the long run and short run model using the autoregressive distributive lag (ARDL) model. The model estimated is given as:

$$\ln FDI_t = \beta_0 + \beta_1 \ln FDI_{t-1} + \beta_2 \ln ATE_{t-1} + \beta_3 \ln CPS_{t-1} + \beta_4 \ln GDP_{t-1} + \beta_5 \ln EXC_{t-1} + \varepsilon_t \quad (4)$$

Table 4.3: ARDL Long Run Form

Dependent Variable: D(LNFDI).

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LNEXC	0.782335	0.420332	1.861232	0.0838
LNCPS	0.721312	0.520689	1.385304	0.1876
LNATE	-16.25625	5.813653	-2.796220	0.0143
LNGDP	2.311751	1.356451	1.704265	0.1104

Source: Authors' computation, EViews 10

From the results above, ATE is statistically significant with a probability value of 0.0143 at 5% level of significance. The elasticity of FDI with respect to ATE is about -16.25625, which implies that if access to electricity increases by 1 percent, on average, foreign direct investment will decrease by about 16.25625 percent. Thus, FDI is very responsive to changes in number of people that have access to electricity with respect to the Nigerian population. In Nigeria, the electrical industry produces, transmits, and distributes electric power in megawatts (MW), far less than is required to satisfy essential domestic and industrial demands. The negative relationship does not conform to the a priori expectations. The estimated coefficients for EXC (0.782335), CPS (0.721312), and GDP (2.311751) have the correct signs as expected but with a probability value of greater than 0.05 level of significance, are not statistically significant in the long run. This indicates that the elasticity of FDI with respect to credit to private sector, exchange rate and market size is not statistically different from zero. This finding is consistent with the works of Adrian and Robert and Corcoran & Gillanders as their results shows that EoDB is not significant for Sub Saharan, OECD countries, and the world poorest regions [19].

Table 4.4: Short-run estimate for ARDL model

Dependent Variable: D(LNFDI).

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-14.58548	1.868236	-7.807086	0.0000
D(LNEXC)	-0.565162	0.248651	-2.272911	0.0393
D(LNCPS)	1.542212	0.393857	3.915667	0.0016
D(LNATE)	-3.266634	1.592640	-2.051082	0.0595
D(LNATE(-1))	5.457357	1.600709	3.409337	0.0042
D(LNATE(-2))	1.903548	1.068643	1.781276	0.0966
D(LNGDP)	4.393226	2.658830	1.652316	0.1207
D(LNGDP(-1))	0.460118	3.162540	0.145490	0.8864
D(LNGDP(-2))	9.824552	2.799206	3.509764	0.0035
CointEq(-1)*	-0.945156	0.122129	-7.738991	0.0000
R-squared	0.806340	Mean dependent var		-0.043698
Adjusted R-squared	0.709509	S.D. dependent var		0.636897
S.E. of regression	0.343269	Akaike info criterion		0.971851
Sum squared resid	2.121010	Schwarz criterion		1.447638
Log likelihood	-3.605908	Hannan-Quinn criter.		1.117304
F-statistic	8.327353	Durbin-Watson stat		2.558213
Prob(F-statistic)	0.000080			

Source: Authors' computation, EViews 10

Table 4.4 presents the results of the estimated ARDL Error Correction Regression. The first part shows the estimated coefficients of short run dynamics, and the second part is the estimates of the error correction term (ECT) that measures the speed of adjustment whereby short-run dynamics converge to the long-run equilibrium path in the model. The coefficient on the lagged error correction term is significant with the correct sign, supporting the evidence of a stable long-run relationship among the variables. The CointEq (-1) of -0.945156 is the speed of adjustment from the short-run equilibrium to the long-run equilibrium. This high speed of adjustment implies that it will take approximately one year to correct all errors/deviations and bring the economy back to equilibrium. The statistical fitness of the model is confirmed by the Adjusted R-squared which is 0.709509. This means that 70.95% of the variation in foreign direct investment is explained by variations in the explanatory variables.

Diagnostics Test

The results of diagnostic test are presented in Table 4.5, 4.6 and figure 4.1 below. From the table, the results show that the error term of the short-run models are free of heteroscedasticity and that the model does not suffer from serial correlation. In addition, the residuals are normally distributed.

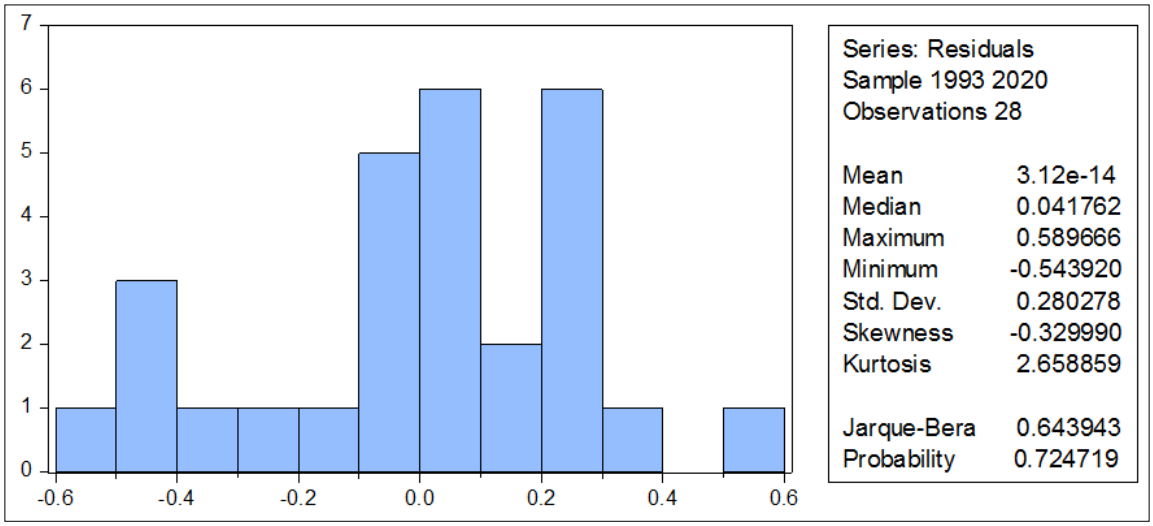

Figure 4.1: Normality Test

From the above histogram, it can be deduced that the error term is normally distributed because it is not skewed to the right or left rather it has a bell shape which means that it is within the confidence interval and outside the rejection region.

Also, the JBcal (0.643943) and JBtab (0.05) (5.99147). Following the decision rule, since 0.643943 < 5.99147, we accept the null hypothesis and conclude that the error term follows a normally distributed. To give credence to this, the P-Value is 0.724719 > 0.05, we, therefore, accept the null hypothesis.

The Breusch-Pagan-Godfrey test which follows the Chi-squares distribution with the degree of freedom will be used to test for heteroskedasticity.

Table 4.5: Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	1.245975	Prob. F (13,14)	0.3434
Obs*R-squared	15.01887	Prob. Chi-Square (13)	0.3062
Scaled explained SS	3.114273	Prob. Chi-Square (13)	0.9975

Source: Authors' computation, EViews 10

From the table 4.5 above, the prob. Chi-square is 0.3062 which is greater than 0.05, therefore, we accept H0 and conclude that the model is homoscedastic.

Table 4.6: Breusch-Godfrey Serial Correlation LM Test

F-statistic	1.554265	Prob. F (2,12)	0.2510
Obs*R-squared	5.760907	Prob. Chi-Square (2)	0.0561

Source: Authors' computation, EViews 10

From table 4.6 above, the prob. Chi-square is 0.0561 which greater than 0.05, therefore we accept the H0 and conclude that the error term are not serially correlated.
Test for Stability

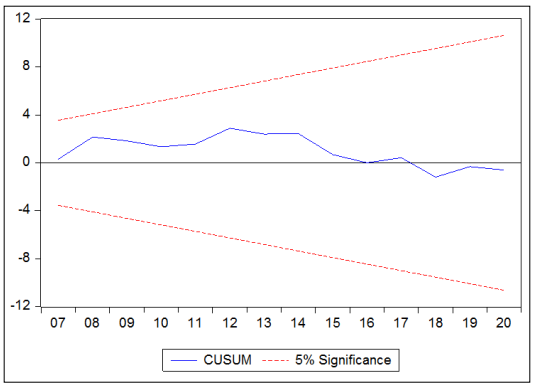

Figure 4.2: CUSUM Test

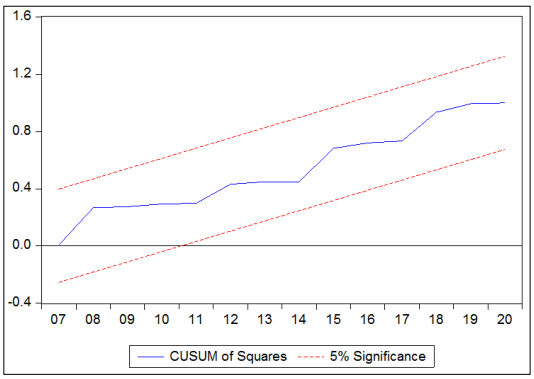

Figure 4.3: CUSUM of Squares Test

To check for the stability of the long-run and short-run coefficients CUSUM and CUSUMSQ tests proposed by Brown. et al., are used. These tests are based on the cumulative sum of the recursive residuals (CUSUM) and the cumulative sum of squared recursive residuals (CUSUMSQ) and are of a graphical nature whereby the residuals are updated recursively and are plotted against the break points for the 5% significance line. The results are reported in Figure 4.2 and 4.3. The results fail to reject the null hypothesis at 5 percent level of significance because the plot of the test falls within the critical limits. Therefore, it can be confirmed that the ARDL model is stable.

Conclusions and Recommendations

It can therefore be concluded that Nigeria stills find difficult in terms of attracting investment due to the complex nature of the business environment. Nigerian government and the citizens made the business environment uncomfortable for local and foreign investors through some dangerous activities such as kidnapping, poor infrastructure, corruption, erratic power supply, poor security of life and property, over taxation and high interest rates. All these drawbacks have given Nigeria bad image or reputation, thereby scaring big investors to neighbouring countries [25-40].

Based on the finding of this research work discussed above, we hereby proffer the following policy measures for improvements in foreign direct investment and growth in the economy at large.

1. There should be optimal control of trade through the borders of the economy. In this way all cross-border economic activities are accounted for.
2. Governments should be intentional about achieving better ease of doing business score and make targeted and reformed policies to this end. One of these ways is by reducing and simplifying procedures involved in registration, setting up a business, tax, licenses, and other matters that borders around businesses. This has a direct impact on the EoDB index. More importantly, the government should factor in protection of rights and security issues emanating from the complex nature of the country.
3. Power generation has not been at its base level, not to talk of optimum capacity. The government should solidify the existing synergy with the eleven (12) distribution companies (DISCOs) in the country to provide tangible support in terms of infrastructure development and electricity distribution, even a little subsidy could help. Also, they should be up and doing in carrying out their oversight function on the DISCOs since their privatization November 2013.
4. Proper monitoring and adequately review policies and programs that financially empower citizens to ensure that these funds get to their expected audience and are used to achieve the desired objective. In this way, they minimize the tendency to embezzle credit meant for a specific sector. In addition, trade policies that encourage Foreign Portfolio Investment and favourable business environment should be made to promote investments in capital-intensive sectors and develop human capital that can absorb technologies coming from advanced countries.
5. Good ease of doing business index is not rocket science, it can be achieved by the continuous conscious effort of the government to improve the business environment of the nation. Hence, all ministries, departments and agencies should collaborate to make Nigeria as favourable as possible to engage and sustain business, and vigorously seek to improve the international stand of the economy with other economies of the world so as to enlarge the market for Nigerian exports, improving FDI and the general welfare of the economy.

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