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MODELING OF THE EFFECTS OF FOREIGN DIRECT INVESTMENT AND INSTITUTIONAL QUALITY ON ECONOMIC GROWTH IN NIGERIA FROM 2005 TO 2024

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ABSTRACT

Foreign Direct Investment (FDI) is widely recognized as a catalyst for economic growth, technological advancement and institutional development especially in developing countries. High quality institutions characterized by strong rule of law, low corruption, political stability, and efficient regulation, significantly boost economic growth and firm performance by reducing transaction costs and uncertainty. The specific objectives of the study are; to develop a model on the impact of foreign direct investment and institutional quality on economic growth in Nigeria from 2005 to 2024 and to ascertain the role of foreign direct investment and institutional quality in promoting economic growth in Nigeria from 2005 to 2024. Using multiple linear regression, a model for foreign direct investment and institutional quality on economic growth in Nigeria from 2005 to 2024 was obtained as $y = 516.66414 - 13.76891x_1 - 122.23457x_2$. The negative FDI coefficient aligns with findings by Akinlo (2004), and Olayiwola and Okodua (2013) for Nigeria, who attributed this to the concentration of FDI in the extractive sector and weak absorptive capacity. Such enclave FDI generates limited backward and forward linkages, causing Dutch disease effects through real exchange rate appreciation, and is characterized by high profit repatriation (Ayanwale, 2007). Also, Institutional quality has negative effect on economic growth in Nigeria for the period under review which implies that rule of law, control of corruption, regulatory efficiency etc. in Nigeria are still operating under low ebbs.

Keywords: Foreign Direct Investments, Economic Growth, Institutional Quality, Economic Development And Spillover.

1 INTRODUCTION

Foreign direct investment (FDI) is a long-term controlling investment (affording more than 10% voting power) made by a firm or entity in one country into a business located in another country. The involvement of substantial tangible assets (such as factories' infrastructure) to expand operations differentiate it from passive portfolio investment. The key aspects of foreign direct investment include technology transfer, long-term capital commitment, managerial expertise, market access and motivations like efficiency, resources or expansion. Foreign Direct Investment (FDI) is more than just moving money across borders; it represents a long-term relationship where a company in one country establishes a lasting interest and significant control over an enterprise in another country (Asiedu, 2009; Asiedu, 2002).

Globalization has led to a greater opening of the world economies to foreign trade and investments. Foreign direct investments have been one prominent feature of this phenomenon. Countries around the world have opened up their economies and created conditions to attract foreign investments in the hope of fostering economic growth. The need for institutional quality in supporting economic growth and investment cannot be overemphasized. High quality institutions characterized by strong rule of law, low corruption, political stability, and efficient regulation, significantly boost economic growth and firm performance by reducing transaction costs and uncertainty. Evidence showed that nations with solid institutions boast of solid legal framework for efficient resource allocation and mobilization, which results in healthy environment for business and economic growth (Abubakar, 2020; Asiedu, 2006).

Nigeria as a developing country faces deficiency of capital in the domestic market to fulfill investment requirements. Nigeria has been working very hard to solve some fundamental issues to promote human development and lower poverty rates. There are various prerequisites that must be met to achieve these goals, with capital being the most important one. People's standard of living rise when their own discretionary income rises, making it possible for them to acquire high-quality health care and education. The economy of Nigeria is known with many macro-economic problems such as slow economic growth, high inflation, unemployment, exchange rate instability and others (Karimi and Yusop, 2009). Improved institutional quality fosters higher investment, enhances total factor productivity (TFP), and increases profitability by creating a stable operating environment (Abubakar, 2020; Luiz, 2009; Rodrik, 2008).

In this study, we developed a model on the impact of foreign direct investment and institutional quality on economic growth in Nigeria from 2005 to 2024 and also ascertain the role of foreign direct investment and institutional quality in promoting economic growth in Nigeria from 2005 to 2024.

2 BASIC DEFINITIONS

2.1 Institutional Quality

Institutional quality refers to the effectiveness and reliability of a country's institutions in governing and regulating its society and economy. It encompasses the strength and efficiency of legal systems, political processes, and public administration, as well as the protection of property rights and the rule of law. High institutional quality is crucial for economic development, social stability and good governance. It is one of the most important factors that boost the economic growth of any country. It is also an indicator for quality governance (Jude and Levieuge, 2017)

2.2 Foreign Direct Investment (FDI)

It is an investment made by an organisation or an individual in one country into a business located in another country. Also, it can be defined as an ownership stake in a company, made by foreign investor, company, or government from another country. More specifically, it describes a controlling ownership of an asset in one country by an entity based in another country (Abala, 2014).

2.3 Economic Growth

Economic growth can be defined as the improvement or increase in the inflation-adjusted market value of the goods and services produced by an economy in a financial year. It is an increase in the capacity of an economy to produce goods and services, compared from one period of time to another (Jude and Levieuge, 2017).

2.4 Gross Domestic Product (GDP)

It is an overall market or monetary value of all the finished goods and services produced by a country in a specific period of time. Gross domestic product (GDP) provides an economic portrait of a country, used to estimate the size of an economy and its growth rate (Adeyeye, Theuns and Pelsier, 2017).

2.5 Economic Development

It is the process of improving a country's economic well-being and quality of life through higher incomes, better jobs, education, health, and infrastructure. Economic development goes beyond economic growth to include social progress and equity. It is simply about economic growth plus quality of life improvements (Adeyeye, Theuns and Pelsier, 2017).

2.6 Spillover

It refers to the effect on the economy of a country from unrelated events happening in another country. For example political crisis or earthquakes in another nation can have negative or positive effects on the economy of a nation (Moga and Xu, 2017).

3 METHODOLOGY

3.1 Data analysis using a multiple linear regression model

Consider a multiple linear regression model

$$y = a_0 + a_1x_1 + a_2x_2 + \cdots + a_px_p + \varepsilon \quad (1.1)$$

Whenever the number of explanatory variables in a multiple regression problem exceeds one, a better way of finding estimates of the regression coefficients is making use of the matrix notations. Thus, the model as stated in (1.1) above can be restated as

$$y = xa + \varepsilon \quad (1.2)$$

Where

$$y = \begin{pmatrix} y_1 \\ y_2 \\ \vdots \\ y_n \end{pmatrix}, x = \begin{pmatrix} 1 & x_{11} & x_{12} & \cdots & x_{1p} \\ 1 & x_{21} & x_{22} & \cdots & x_{2p} \\ \vdots & \vdots & \vdots & \ddots & \vdots \\ 1 & x_{n1} & x_{n2} & \cdots & x_{np} \end{pmatrix}, a = \begin{pmatrix} a_0 \\ a_1 \\ \vdots \\ a_p \end{pmatrix} \text{ and } \varepsilon = \begin{pmatrix} \varepsilon_1 \\ \varepsilon_2 \\ \vdots \\ \varepsilon_n \end{pmatrix}$$

Therefore, equation (1.2) becomes

$$\begin{pmatrix} y_1 \\ y_2 \\ \vdots \\ y_n \end{pmatrix} = \begin{pmatrix} 1 & x_{11} & x_{12} & \cdots & x_{1p} \\ 1 & x_{21} & x_{22} & \cdots & x_{2p} \\ \vdots & \vdots & \vdots & \ddots & \vdots \\ 1 & x_{n1} & x_{n2} & \cdots & x_{np} \end{pmatrix} \begin{pmatrix} a_0 \\ a_1 \\ \vdots \\ a_p \end{pmatrix} + \begin{pmatrix} \varepsilon_1 \\ \varepsilon_2 \\ \vdots \\ \varepsilon_n \end{pmatrix}$$

Remark: x is called a design matrix.

3.2 Steps in multiple regression analysis

The following steps can be used in solving a multiple regression problem:

- Determination of the model's parameters
- Ensuring that the basic assumptions are met
- Testing the significance of the model's parameters
- Compute the coefficient of determination to assess the predictive strength of the model
- Carry out the necessary prediction

3.3 Estimation of the model's parameter ($\hat{a}$)

Consider $y = xa + \varepsilon$ as stated in equation (1.2). Thus,

$$\varepsilon = y - xa$$

$$\sum_{i=1}^n \varepsilon_i^2 = \varepsilon' \varepsilon = (y - xa)'(y - xa)$$

$$\text{Let } L = (y - xa)'(y - xa)$$

$$= y'y - y'xa - x'a'y + a'x'xa$$

$$= y'y - 2a'x'y + a'x'xa$$

$$\frac{\partial L}{\partial a} = 0 \Rightarrow -2x'y + 2x'x\hat{a} = 0$$

$$\hat{a} = (x'x)^{-1}x'y \quad (1.3)$$

Remark: $a'x'y$ is of dimension 1×1 , i.e. a scalar. Its transpose $(a'x'y)' = y'xa$ is similarly a scalar, hence $-y'xa - a'x'y = 2a'x'y$. Now, equation (1.3) can be written as

$$(x'x)(\hat{a}) = (x'y) \quad (1.4)$$

Thus, equation (1.4) can be written in matrix notations as:

$$\begin{pmatrix} n & \sum_{i=1}^n x_{i1} & \sum_{i=1}^n x_{i2} & \cdots & \sum_{i=1}^n x_{ip} \\ \sum_{i=1}^n x_{i1} & \sum_{i=1}^n x_{i1}^2 & \sum_{i=1}^n x_{i1}x_{i2} & \cdots & \sum_{i=1}^n x_{i1}x_{ip} \\ \vdots & \vdots & \vdots & \ddots & \vdots \\ \sum_{i=1}^n x_{ip} & \sum_{i=1}^n x_{ip}x_{i1} & \sum_{i=1}^n x_{ip}x_{i2} & \cdots & \sum_{i=1}^n x_{ip}x_{ip} \end{pmatrix} \begin{pmatrix} a_0 \\ a_1 \\ a_2 \\ \vdots \\ a_p \end{pmatrix} = \begin{pmatrix} \sum_{i=1}^n y_1 \\ \sum_{i=1}^n x_{i1}y_1 \\ \vdots \\ \sum_{i=1}^n x_{ip}y_1 \end{pmatrix}$$

3.4 Modeling technique

Multiple linear regression model (that involves two independent variables) was used to develop a model on the impact of foreign direct investment and institutional quality on economic growth in Nigeria from 2005 to 2024. The formular for the multiple linear regression model is

$$y = a_0 + a_1x_1 + a_2x_2 + \varepsilon$$

3.5 3.1.5 Creating database for foreign direct investment, institutional quality and economic growth in Nigeria from 2005 to 2024

- **Dependent Variable** = Economic growth or Gross Domestic Product (GDP) = y – variable
- **Independent Variable** = Foreign direct investment (FDI) = x_1 – variable and Institutional Quality = x_2 – variable

Table 1: Database for foreign direct investment, institutional quality and economic growth in Nigeria from 2005 to 2024

Year	Dependent Variable (y – variable)	Independent Variable (x – variable)	
	Gross Domestic Product (GDP) in Billion US Dollar (\$ or USD)	Foreign Direct Investment (FDI) in Billion of US Dollar (\$ or USD) $\Rightarrow (x_1 - \text{variable})$	Institutional Quality in Billion of US Dollar (\$ or USD) $\Rightarrow (x_2 - \text{variable})$
2005	175.67	4.98	0.456
2006	238.45	4.85	0.457
2007	278.26	6.04	0.535
2008	339.48	8.19	0.568
2009	295.01	8.56	0.664
2010	366.99	6.03	0.166
2011	414.47	8.84	0.291
2012	463.97	7.07	0.307
2013	520.12	5.56	0.364
2014	574.18	4.69	0.35
2015	493.03	3.06	0.7
2016	404.65	3.45	0.645
2017	375.75	2.41	0.764

2018	421.74	0.775	0.715
2019	474.52	2.31	0.136
2020	432.2	2.39	0.309
2021	440.83	3.31	0.38
2022	477.40	-0.187	0.396
2023	363.85	1.87	0.316
2024	487.27	1.08	0.654

- Sources of Data for Gross Domestic Product (GPD) are; National Bureau of Statistics (NBS) Annual Report 2024, Central Bank of Nigeria (CBN), World Bank Statistical Bulletin 2024, International Monetary Fund (IMF) and <https://www.macrotrends.net/global-metrics/countries/nga/nigeria/gdp-gross-domestic-product>
- Sources of Data for Foreign Direct Investment (FDI) are; National Bureau of Statistics (NBS), Foreign Direct Investment (FDI) Statistical Bulletin 2024, Central Bank of Nigeria (CBN) and <https://www.macrotrends.net/global-metrics/countries/nga/nigeria/foreign-direct-investment>
- Sources of Data for Institutional Quality are; National Bureau of Statistics (NBS), Central Bank of Nigeria (CBN), Economic and Financial Crimes Commission (EFCC) Statistical Bulletin 2024, Independent Corrupt Practices and Other Related Offences Commission (ICPC) Statistical Bulletin 2024, United Nations Development Programmes (UNDP) Annual Report 2024, Federal Ministry of Justice, Ministry of Police Affairs, United Nations Office on Drugs and Crime Annual Report 2024, National Intelligence Agency (NIA) Annual Report 2024, Nigeria Security Statistical Bulletin 2024 and Nigeria Police Force (NPF) Annual Report 2024

4 RESULTS

4.1 Multiple Linear regression model

Develop a multiple linear regression model on Gross Domestic Product (in Billion US Dollar), Foreign Direct Investment (in Billion US Dollar), and Institutional Quality (in Billion US Dollar) in Nigeria from 2005 to 2024 as shown in the table 1 below.

Table 2: Database for foreign direct investment, institutional quality and economic growth in Nigeria from 2005 to 2024

Year	Dependent Variable (y – <i>variable</i>)	Independent Variable (x – <i>variable</i>)	
	Gross Domestic Product (GDP) in Billion US Dollar (\$ or USD)	Foreign Direct Investment (FDI) in Billion of US Dollar (\$ or USD) $\Rightarrow (x_1 - \text{variable})$	Institutional Quality in Billion of US Dollar (\$ or USD) $\Rightarrow (x_2 - \text{variable})$
2005	175.67	4.98	0.456
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2011	414.47	8.84	0.291
2012	463.97	7.07	0.307
2013	520.12	5.56	0.364
2014	574.18	4.69	0.35
2015	493.03	3.06	0.7
2016	404.65	3.45	0.645

2017	375.75	2.41	0.764
2018	421.74	0.775	0.715
2019	474.52	2.31	0.136
2020	432.2	2.39	0.309
2021	440.83	3.31	0.38
2022	477.40	-0.187	0.396
2023	363.85	1.87	0.316
2024	487.27	1.08	0.654

4.1.1 Solution

The formular for multiple linear regression model is

$$y = a_0 + a_1x_1 + a_2x_2 + \varepsilon$$

Thus, the above model can be restated as

$$y = xa + \varepsilon$$

where

$$y = \begin{pmatrix} y_1 \\ y_2 \\ \vdots \\ y_n \end{pmatrix}, x = \begin{pmatrix} 1 & x_{11} & x_{12} & \dots & x_{1p} \\ 1 & x_{21} & x_{22} & \dots & x_{2p} \\ \vdots & \vdots & \vdots & \ddots & \vdots \\ 1 & x_{n1} & x_{n2} & \dots & x_{np} \end{pmatrix}, a = \begin{pmatrix} a_0 \\ a_1 \\ \vdots \\ a_p \end{pmatrix} \text{ and } \varepsilon = \begin{pmatrix} \varepsilon_1 \\ \varepsilon_2 \\ \vdots \\ \varepsilon_n \end{pmatrix}$$

Therefore, $y = xa + \varepsilon$ becomes

$$\begin{pmatrix} y_1 \\ y_2 \\ \vdots \\ y_n \end{pmatrix} = \begin{pmatrix} 1 & x_{11} & x_{12} & \dots & x_{1p} \\ 1 & x_{21} & x_{22} & \dots & x_{2p} \\ \vdots & \vdots & \vdots & \ddots & \vdots \\ 1 & x_{n1} & x_{n2} & \dots & x_{np} \end{pmatrix} \begin{pmatrix} a_0 \\ a_1 \\ \vdots \\ a_p \end{pmatrix} + \begin{pmatrix} \varepsilon_1 \\ \varepsilon_2 \\ \vdots \\ \varepsilon_n \end{pmatrix}$$

Table 3: Solution table for the data in Table 1

y	x_1	x_2	yx_1	yx_2	y^2	x_1^2	x_2^2	x_1x_2
175.67	4.98	0.456	874.8366	80.10552	30859.95	24.8004	0.207936	2.27088
238.45	4.85	0.457	1156.483	108.9717	56858.4	23.5225	0.208849	2.21645
278.26	6.04	0.535	1680.69	148.8691	77428.63	36.4816	0.286225	3.2314
339.48	8.19	0.568	2780.341	192.8246	115246.7	67.0761	0.322624	4.65192
295.01	8.56	0.664	2525.286	195.8866	87030.9	73.2736	0.440896	5.68384
366.99	6.03	0.166	2212.95	60.92034	134681.7	36.3609	0.027556	1.00098
414.47	8.84	0.291	3663.915	120.6108	171785.4	78.1456	0.084681	2.57244
463.97	7.07	0.307	3280.268	142.4388	215268.2	49.9849	0.094249	2.17049
520.12	5.56	0.364	2891.867	189.3237	270524.8	30.9136	0.132496	2.02384
574.18	4.69	0.35	2692.904	200.963	329682.7	21.9961	0.1225	1.6415
493.03	3.06	0.7	1508.672	345.121	243078.6	9.3636	0.49	2.142
404.65	3.45	0.645	1396.043	260.9993	163741.6	11.9025	0.416025	2.22525
375.75	2.41	0.764	905.5575	287.073	141188.1	5.8081	0.583696	1.84124

421.74	0.775	0.715	326.8485	301.5441	177864.6	0.600625	0.511225	0.554125
474.52	2.31	0.136	1096.141	64.53472	225169.2	5.3361	0.018496	0.31416
432.2	2.39	0.309	1032.958	133.5498	186796.8	5.7121	0.095481	0.73851
440.83	3.31	0.38	1459.147	167.5154	194331.1	10.9561	0.1444	1.2578
477.4	-0.187	0.396	-89.2738	189.0504	227910.8	0.034969	0.156816	-0.07405
363.85	1.87	0.316	680.3995	114.9766	132386.8	3.4969	0.099856	0.59092
487.27	1.08	0.654	526.2516	318.6746	237432.1	1.1664	0.427716	0.70632
$\sum y =$ 8037.84	$\sum x_1 =$ 85.278	$\sum x_2 =$ 9.173	$\sum yx_1 =$ 32602.28	$\sum yx_2 =$ 3623.953	$\sum y^2 =$ 3419267	$\sum x_1^2 =$ 496.9327	$\sum x_2^2 =$ 4.871723	$\sum x_1x_2 =$ 37.76002

To estimate the coefficient of the Model a , we have

$$\hat{a} = (x'x)^{-1}x'y$$

where,

$$x'x = \begin{bmatrix} n & \sum x_1 & \sum x_2 \\ \sum x_1 & \sum x_1^2 & \sum x_1x_2 \\ \sum x_2 & \sum x_1x_2 & \sum x_2^2 \end{bmatrix} = \begin{bmatrix} 20 & 85.278 & 9.173 \\ 85.278 & 496.9327 & 37.76002 \\ 9.173 & 37.76002 & 4.871723 \end{bmatrix}$$

and,

$$x'y = \begin{bmatrix} \sum y_i \\ \sum x_1y_i \\ \sum x_2y_i \end{bmatrix} = \begin{bmatrix} 8037.84 \\ 32602.28 \\ 3623.953 \end{bmatrix}$$

$$(x'x)^{-1} = \frac{Adj(x'x)}{|x'x|}$$

where,

$$|x'x| = \begin{vmatrix} 20 & 85.278 & 9.173 \\ 85.278 & 496.9327 & 37.76002 \\ 9.173 & 37.76002 & 4.871723 \end{vmatrix} = 1735.24$$

Then,

$$(x'x)^{-1} = \begin{bmatrix} 0.57346527 & -0.39809016 & -0.77122775 \\ -0.03980902 & 0.007659189 & -0.01559141 \\ -0.77122775 & 0.015591405 & 1.53656938 \end{bmatrix}$$

Therefore,

$$\hat{a} = (x'x)^{-1}x'y = \begin{bmatrix} 0.57346527 & -0.39809016 & -0.77122775 \\ -0.03980902 & 0.007659189 & -0.01559141 \\ -0.77122775 & 0.015591405 & 1.53656938 \end{bmatrix} \begin{bmatrix} 8037.84 \\ 32602.28 \\ 3623.953 \end{bmatrix} = \begin{bmatrix} 516.66414 \\ -13.76891 \\ -122.23457 \end{bmatrix}$$

Therefore the multiple linear regression model $y = a_0 + a_1x_1 + a_2x_2$ becomes

$$y = 516.66414 + (-13.76891)x_1 + (-122.23457)x_2$$

$$y = 516.66414 - 13.76891x_1 - 122.23457x_2$$

Thus, the linear model of foreign direct investment and institutional quality on economic growth in Nigeria from 2005 to 2024 is

$$y = 516.66414 - 13.76891x_1 - 122.23457x_2$$

5 DISCUSSION

The research result of the study found that the multiple linear regression model for foreign direct investment and institutional quality on economic growth in Nigeria from 2005 to 2024 is

$$y = 516.66414 - 13.76891x_1 - 122.23457x_2$$

The intercept (516.66414) implies that if both foreign direct investment and institutional quality are zero, the GDP is predicted to be \$516.66414 billion. Economically, this is the baseline level of independent of FDI inflows and institutional quality for the period under review. The foreign direct investment has negative effect on economic growth in Nigeria for the period under review and this could suggest that there is weak domestic capacity to absorb FDI due to poor infrastructure, human capital, and institutions which may result that FDI does not translate to productivity gain or it could suggest that FDI inflow into Nigeria during 2005 to 2024 may not have been channeled into productive sectors or they could be associated with profit repatriation and weak linkages between foreign firms and local economies. The negative FDI coefficient as we encountered in our research result aligns with findings by Akinlo (2004), and Olayiwola and Okodua (2013) for Nigeria, who attributed this to the concentration of FDI in the extractive sector and weak absorptive capacity. Such enclave FDI generates limited backward and forward linkages, causes Dutch disease effects through real exchange rate appreciation, and is characterized by high profit repatriation (Ayanwale, 2007). Furthermore, Nigeria's weak absorptive capacity in terms of human capital and infrastructure may prevent the economy from benefitting from FDI spillovers (Alfaro, Chanda, Kalemli-Ozcan, 2004).

Furthermore, in the result of the study, Institutional quality has negative effect on economic growth in Nigeria for the period under review which implies that rule of law, control of corruption, regulatory efficiency etc. in Nigeria are still operating under low ebbs. That is, anti-corruption agencies, judiciary, and regulatory bodies in Nigeria need operational autonomy, adequate funding, and enforcement capacity. Mere passage of law without implementation may explain the perverse relationship. Also, the negative institutional coefficient may reflect measurement limitations and confounding influence of oil price cycles, as periods of institutional reform in Nigeria often coincided with external shocks that depressed GDP. This result contradicts North (1990) institutional theory and the findings of Acemoglu, Johnson and Robinson (2001) that institutions are fundamental to determinants of long-run growth. Several factors may explain this counterintuitive result. Firstly, the contemporaneous specification ignores lag effects. Institutional reforms may depress output in the short run as rent-seeking structures are dismantled before efficiency gains materialized (Mehlum, Moene and Torvik, 2006). Secondly, the institutional quality index may capture de jure rather than de facto institutions. Nigeria recorded relatively high institutional quality in 2015 (0.700) and 2017 (0.764), yet GDP declined due to 2014 to 2016 oil price collapse, creating a spurious negative correlation.

To make FDI more effective, Nigeria needs stronger institutions to regulate and guide foreign investment into sectors that benefits the economy. Institutions reforms could amplify the positive effects of FDI and reduce its potential downsides. Government should pair institutional reforms with social safety nets and compensation for losers to reduce growth-dampening effects during transition.

6 CONCLUSION

Globalization has led to a greater opening of the world economies to foreign trade and investments. Foreign direct investments have been one prominent feature of this phenomenon. Countries around the world have opened up their economies and created conditions to attract foreign investments in the hope of fostering economic growth. The need for institutional quality in supporting economic growth and investment cannot be overemphasized. High quality institutions characterized by strong rule of law, low corruption, political stability, and efficient regulation, significantly boost economic growth and firm performance by reducing transaction costs and uncertainty. Improved institutional quality fosters higher investment, enhances total factor productivity (TFP), and increases profitability by creating a stable operating environment. Evidence showed that nations with solid institutions boost of solid legal framework for

efficient resource allocation and mobilization, which results in healthy environment for business and economic growth. In this study, we found that a model for foreign direct investment and institutional quality on economic growth in Nigeria from 2005 to 2024 is

$$y = 516.66414 - 13.76891x_1 - 122.23457x_2$$

Recommendation

- The negative FDI coefficient reflects Nigeria's over-concentration of FDI in the oil and gas sector, which exhibits enclave characteristics and weak linkages. Therefore, the Federal Government through the Nigerian Investment Promotion Commission should;
 - Introduce sector specific guidelines/policies for FDI incentives favouring manufacturing, agriculture and ICT, with minimum local content and technology transfer requirements.
 - Impose higher effective tax rates on extractive FDI while granting pioneer status to FDI in value adding industries.
 - Fast-track the implementation of special economic zones with dedicated power, transport, and port infrastructure to attract non-oil FDI.
- The negative institutional quality coefficient suggests formal institutional improvements have not translated to growth due to weak enforcement. Therefore, Government should:
 - Grant full financial and operational autonomy to anti-corruption agencies, judiciary and regulatory bodies to ensure enforcement of existing laws.
 - Digitalize business registration, contract enforcement, and tax administration at state and federal level to reduce bureaucratic discretion and rent-seeking.
 - Link budgetary allocations to MDAs with measurable governance key performance indicators, not just passage of new laws.

STATEMENTS ON COMPLIANCE WITH ETHICAL STANDARDS

Funding Source

Economic situation of Nigeria.

Disclosure of conflict of interest

The authors declare no conflicts of interest regarding this manuscript.

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