



Determinant of Economic Resilience in Nigeria

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ABSTRACT

To evaluate factors that influence the economy resilience in Nigeria the study made used of FDI and TROP as explanatory variables. The study made used of secondary data obtain from World Bank data base for the period reviewed. From the statistics using econometric views version 9. FDI and TROP both have positive influence on ECOR. Only FDI stood insignificant. The study recommend that an economy should endeavour to diversify the inflows from its investment from other nation rather than on a particular sector. Likewise an economy should enforce policies that allow for trade openness but should be moderated in other not to be susceptible to the devastating impacts associated with trade openness.

Keywords: Foreign Direct Investment, Trade Openness, Resilience

INTRODUCTION

The resilience of an economy relates to the efficient use of resources over time for investment. It connotes the ability of an economy to withstand, recover quickly or avoid shock altogether in order to achieve greater level of performance. The higher the level of economic resilience, the lower will be the economic losses incurred from a shock overtime. Resilience could be inform of performance, supply chain and in workforce. An economy would be said to be resilience if by performance it achieve economic policy objective of stable economic growth, low unemployment, stable inflation and satisfactory balance of payments. Balance of payment indicates money flow in and out of an economy within a specified period of time. A satisfactory balance of payments means that there are more inflows than outflows. Usually, equilibrium or sustainable deficits/surpluses are more desirable.

Resilience is central to the concept of growth. Economic growth relates to an increase in the productive potential of an economy. Economic growth can be said to be the level of output that the economy can produce as well as increase in the income of citizens of a country. There are several factors in an economic that influences her productive potential: inflation, interest rate, exchange rate, value from foreign direct investments, imports and exports etc. The growth of an economy depends on the activities of primary sector, secondary sectors as well as the tertiary sectors. The primary sectors extract raw materials, the secondary sector engage in manufacturing while the tertiary sector provide services. The role played by the service providers cannot be downplayed especially as it pertains to banks and non-bank financial institution. The financial sector is one of the most critical sectors in the economy with influence on the direction and level of economic growth (Aroghene, 2023). The intermediation role of financial intermediaries such as commercial banks, insurance firms and mutual funds etc facilitates financial mobilisation and allocation efficiency. Banks create credit while Insurance plays significant role in sustainable growth of an economic through loss mitigation trade and promotion of commerce (Aroghene, 2022; Fadun & Peter, 2023).

In evaluating factors that determine economy growth, some researchers examined the role of Insurance companies. They opined that insurers invest the fund accumulated through insured premiums in government debentures and stock markets, thereby increasing stock prices for investors' benefit and improving Nigeria's economy (Fadun & Shoyemi, 2018; Okparaka, 2018; Igoni, Odi & Nwude, 2020). Likewise, (Eze & Okoye, 2013; Fadun & Shoyemi, 2018) evaluated insurance investment funds and practices as factors that influence economic growth. Meanwhile, (Borensztein, De Gregorio & Lee 1998; Zhang, 1999; Moudatsou, 2003) highlight the role of FDI as an important vehicle of economic growth. When Dritsakis, Varelas and Adamopoulos (2006) examined the main determinants of Economic Growth in Greece, they used exports, gross capital formation, foreign direct investments as explanatory variables while per capita GDP as proxy for Economy growth. This study expand the scope of knowledge and filled the gap in literature by the used of Foreign Direct Investment (FDI) and Trade openness as determinants of economic resilience with recent economic data as it pertains to Nigeria.

Review of Related Literature/Conceptual Framework

Foreign direct investment have been one of the major development financing options often rely upon by the developing countries to drive their stunted economies to a sustainable growth (Ajide, 2014). The effect of foreign direct investment on economic growth is dependent on the level of technological advancement of an economy, the economic stability, the state investment policy and the degree of openness. FDI inflows can affect capital formation because they are a source of financing and capital formation is one of the prime determinants of economic growth. Inward FDI may increase a host's country productivity and change its comparative advantage. These researchers found significant positive impact of FDI on growth (Sylwester, 2005; Lumbila, 2005; Ndikumana & Verick, 2008). Whereas some others established contrary results (Fry, 1993; Dutt, 1997; Hermes & Lensink, 2003).

On the other hand, trade openness (TROP) refers to how free or how strict a country trade relations is with other countries. TROP represents the involvement of the state in international flows of goods and capital. Trade facilitates products output with a comparative advantage in a country resulting to a higher level of national wealth. It is calculated as the ratio of the sum of the exports and imports of the counties to the national income. Since the ratio of exports and imports to gross domestic product denotes an open economy index, a higher ratio indicates a relatively higher open economy. On the other hand a lower ratio of exports to gross domestic product reflects to a limited trade policy and a more close economy. Bengoa and Sanchez-Robles (2003) explored the connection between economic freedom, FDI and economic growth. The results show that countries with higher index have more inflows of FDI and thus have greater growth rates. Levina (2011) investigated the relationship between foreign direct investment, economic freedom and economic growth. The GMM estimation of dynamic model showed that both of the variables foreign direct investment and economic freedom positively influence the economic growth.

Theoretical Framework

The classical theory of international trade was used to underpin the study. The theory is discussed below:

Classical Theory of International Trade

International trade is a case of geographical speculation. Different countries have different set of resources. This theory can be attributed to Ricardo in 1817 which he based on comparative advantage. Smith (1776) held that for two nations to trade with each other voluntarily, both nations must gain absolute advantage theory. However, trade can take place even in absence of absolute cost advantage and when the domestic exchange rates are different (Kotha & Sahu, 2016).

Empirical Review

Blomstoerm, Lipsey, Zejan (1994) found a unidirectional causal relationship between FDI inflows as a percentage of GDP and the growth of per capita GDP for all developed countries over the period 1960-1985. Zhang (1999) examines the causal relationship between foreign direct investment and economic growth with Granger causality analysis for 10 Asian countries. The results of this study suggested that

there is a unidirectional causality between foreign direct investment and economic growth with direction from FDI to GDP in Hong Kong, Japan, Singapore, Taiwan, a unidirectional causality between exports and economic growth with direction from economic growth to exports for Malaysia and Thailand, also there is a bilateral causal relationship between FDI and GDP for Kina and Indonesia, while there is no causality for Korea and Philippines. Borensztein, De Gregorio and Lee (1998) highlight the role of FDI as an important vehicle of economic growth only in the case that there is a sufficient absorptive capability in the host economy. This capability is dependent on the achievement of a minimum threshold of human capital. Moudatsou (2003) suggested that FDI inflows have a positive effect on economic growth in European Union countries both directly and indirectly through trade reinforcement over the period 1980-1996. Dritsakis, Varelas and Adamopoulos (2006) examined the main determinants of Economic Growth in Greece between 1960 to 2002. They used exports, gross capital formation, foreign direct investments as explanatory variables while per capita GDP as proxy for Economy growth. The Granger causality tests showed that there is a unidirectional causal relationship between exports and gross fixed capital formation and also there is a unidirectional causal relationship between foreign direct investments and economic growth. Ajide (2014) investigated the determinants of economic growth in Nigeria spanning 1980 through 2010 using annual time series data. Emanated results show that the same set of variables like labour, life expectancy, degree of openness and economic freedom are factors affecting the level of economic growth in both but at different levels of significance.

This literature, is therefore interested in unravelling the extent to which economic freedom/ trade openness (TROP) interacts with FDI to engender economic resilience.

RESEARCH METHODOLOGY

In order to evaluate how FDI and TROP interact within an economy to influence economy resilience in Nigeria, data already in existence (secondary data) were sorted from World Bank data base between 2013 to 2021. The study period was chosen in other to capture how FDI and TROP has impacted the Nigerian economy for the last 9years and also based on data availability. Ex post facto research design was employed as it is best suited for the study since it involved study in retrospect. Descriptive statistics, multi collinearity, heteroskedascity test, normality test and correlation analysis, was used to describe the data while ordinary least square was used for the estimation of the influence of FDI and TROP on economic resilience through the usage of the econometric views version 9. The model is stated thus as

$$ECOR = f(FDI, TROP)$$

$$ECOR = \beta_0 + \beta_1 FDI + \beta_2 TROP + \varepsilon$$

Where:

ECOR = Economic Resilience measured by Gross Domestic Product Annual Growth Rates.

β_0 = Intercept

FDI = Foreign Direct Investment as percentage of Gross Domestic Product.

TROP = Trade Openness as percentage of Gross Domestic Product.

β_0 = Intercept

β_1 – β_2 = Coefficient of the Independent Variables.

ε = Error Term

Aprori expectation for the variables is a positive sign.

DATA PRESENTATION AND ANALYSIS

The data for ECOR, FDI and TROP obtained from World Bank Data Base used for the analysis is presented in appendix 1 for the period of 2013 through 2021.

Table 1: Descriptive Statistics

	ECOR	FDI	TROP
Mean	2.311111	0.677778	26.24444
Median	2.200000	0.600000	26.30000
Maximum	6.700000	1.100000	34.00000
Minimum	-1.800000	0.200000	16.40000
Std. Dev.	2.992676	0.258736	6.279552
Skewness	0.085956	-0.200528	-0.166268
Kurtosis	2.019429	2.757623	1.609161
Jarque-Bera	0.371652	0.082347	0.766880
Probability	0.830418	0.959663	0.681513
Observations	9	9	9

Source: Computed From Data Obtained From World Bank Database Using Econometric Views Version 9.0.

Table 1 presents descriptive statistics of the variable of interest. The mean value of GDP annual rate is 2.3111 with minimum and maximum values of -1.8000 and 6.7000 respectively. For FDI, the mean, minimum and maximum value are 0.6777, 0.2000 and 1.1000. Likewise, the mean, minimum and maximum value for TROP are 26.2442, 16.4000 and 34.0000 respectively. The values of the asymmetry distribution of the series around the mean is negative apart from ECOR that is positive. The negative values for FDI AND TROP indicated that the distribution has a long left tail. Furthermore, the Jarque-Bera probability indicated that all the variable of study are normally distributed which suggest that the distribution is flat relative to normal.

Table 2: Multi collinearity Test

Variance Inflation Factors

Date: 07/09/23 Time: 22:11

Sample: 2013 2021

Included observations: 9

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	17.80468	34.52557	NA
FDI	9.016304	9.072137	1.040393
TROP	0.015307	21.48445	1.040393

Source: Computed From Data Obtained From World Bank Database Using Econometric Views Version 9.0.

The values of the variance inflation factors for the variable of study reflect the absence of the problem of multi collinearity between the variables.

Table 3: Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	0.714258	Prob. F(2,6)	0.5269
Obs*R-squared	1.730715	Prob. Chi-Square(2)	0.4209
Scaled explained SS	0.472946	Prob. Chi-Square(2)	0.7894

Source: Computed From Data Obtained From World Bank Database Using Econometric Views Version 9.0.

The Prob. Chi-square (2) value greater than 0.05 indicated that the variables of the study is homoscedastic. Hence the assumption of heteroskedascity of the variables is therefore refuted.

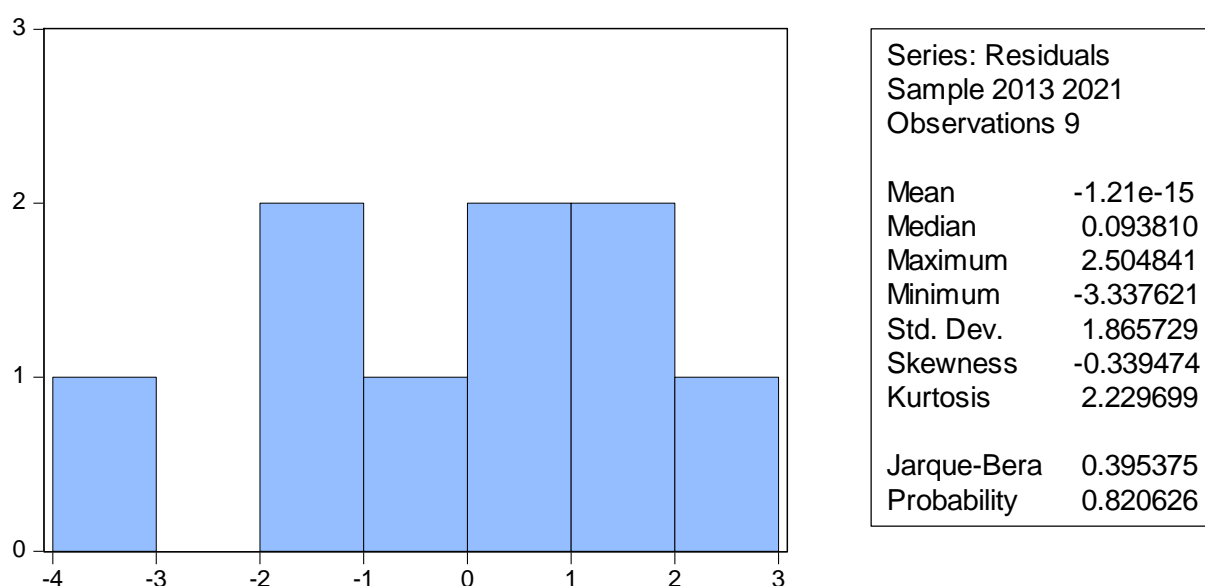


Figure 1: Normality Test

Source: Computed From Data Obtained From World Bank Database Using Econometric Views Version 9.0.

The normality test displayed in figure 1 is a confirmation of the values displayed in the descriptive statistics earlier presented in table 1. Thus from the Jarque-Bera Prob. of 0.8206 indicated that the data are normally distributed and suitable for regression analysis.

Table 4: Summary of Correlation

	ECOR	FDI	TROP
ECOR	1.000000	0.363584	0.606989
FDI	0.363584	1.000000	-0.197039
TROP	0.606989	-0.197039	1.000000

Source: Computed From Data Obtained From World Bank Database Using Econometric Views Version 9.0.

From the correlation values in table 4, FDI and TROP has a positive correlation with ECOR. The correlation value of 0.3636 for FDI depicts moderate relationship. While the correlation value of 0.6070

for TROP depicts strong correlation. It suffice to say that the correlation values are quite moderate since there existed no perfect correlation between the variables of study.

Table 5: Regression Result

Dependent Variable: ECOR

Method: Least Squares

Date: 07/09/23 Time: 22:10

Sample: 2013 2021

Included observations: 9

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-10.46059	4.219559	-2.479073	0.0479
FDI	5.814501	3.002716	1.936414	0.1009
TROP	0.336481	0.123721	2.719682	0.0347
R-squared	0.611333	Mean dependent var		2.311111
Adjusted R-squared	0.481777	S.D. dependent var		2.992676
S.E. of regression	2.154358	Akaike info criterion		4.634064
Sum squared resid	27.84755	Schwarz criterion		4.699806
Log likelihood	-17.85329	Hannan-Quinn criter.		4.492194
F-statistic	4.718691	Durbin-Watson stat		1.893786
Prob(F-statistic)	0.058713			

Source: Computed From Data Obtained From World Bank Database Using Econometric Views Version 9.0.

Table 5 depict correlation value for the variables of the study. From the table, FDI has a coefficient value of 5.8145, t- statistics of 1.9364 with Prob. value of 0.1009. From this values, it suffice to say that FDI has a positive but menial effect on ECOR in Nigeria for the period studied. This may be due to economy factors that interplay with the level of inflows in and out of the country. Ajide (2014) opined that this can be attributed to the fact that most of the inflows are concentrated on petroleum sector whose impact in terms of employment generation is negligible. The findings conform to that of Moudatsou (2003) and Dritsakis ,Varelas and Adamopoulos (2006). TROP has a coefficient value of 0.3365, t- statistics of 2.7197 with Prob. value of 0.0347. The values for TROP is an indication of a positive as well as a meaningful influence on ECOR in Nigeria. This outcome do not fully agree to that of Ajide (2014). Furthermore, the coefficient of determination R-square 61% depict that 61% variation in ECOR is as a result of the studied variables. While the 39% difference is accounted for by other factors that influence ECOR not included in the study model. The Durbin-Watson stat of 1.8938 is an indication of positive serial correlation.

CONCLUSION AND RECOMMENDATION

From the analysis, FDI and TROP has a positive effect on ECOR. Although FDI happen to have menial effect on ECOR. The influence of FDI and TROP on ECOR from the value of the R-squared indicated that to a reasonable extent foreign direct inflows and trade openness influence economy resilience in Nigeria for the period studied.

The study recommend that an economy should endeavour to diversify the inflows from its investment from other nation rather than on a particular sector. Likewise an economy should enforce policies that allow for trade openness but should be moderated in other not to be susceptible to the devastating impacts associated with trade openness.

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Appendix 1

Data for ECOR, FDI and TROP

YEAR	ECOR (%)	TROP (%)	FDI (%)
2013	6.7	31	1.1
2014	6.3	30.9	0.8
2015	2.7	21.3	0.6
2016	-1.6	20.7	0.9
2017	0.8	26.3	0.6
2018	1.9	33	0.2
2019	2.2	34	0.5
2020	-1.8	16.4	0.6
2021	3.6	22.6	0.8

Source: World Bank Data Base.