

Accounting for the Determinants of FDI Inflow in Nigeria amidst Global Oil Price Shock and Economic Recession

Udi Joshua

Federal University Lokoja, Department of economics, Lokoja, Kogi State, Nigeria, E-mail: udijoshua@yahoo.com

Abstract

Achieving high volume of FDI inflow is key to attaining economic growth in the host economy because FDI inflow is observed as a factor that play a complementary role to the domestic resource to help generate the desired growth Kinda (2013). Recently, the Nigeria economy suffered setback in attracting FDI inflow which is presumed to be in connection to the fall in oil price and the economic recession considering the fact that Nigeria is an oil-driven economy (UNCTAD 2018). Thus, this study mainly seeks to investigate the determinants of FDI inflow to Nigeria within the time frame from 1970 to 2018 to ascertain the empirical reality of this presumption. The empirical analysis begins with stationarity test using the traditional ADF and PP tests which revealed a mixed order of integration. This informed the adoption of the dynamic ARDL bound test for the purpose of analyzing the relationship between the series. The findings show that trade openness exerts positive and significant impact on FDI inflow implying that trade openness is a key determinant of FDI inflow into the economy. A 1% improvement in trade openness will cause a drastic increase in FDI inflow by about 0.609% ($P > 0.0762$) and 0.830% ($P > 0.0679$) in both short and long run. Similarly, oil price was found to positively influence FDI inflow into the economy. In contrast, the finding revealed that economic recession plays anti-growth in FDI inflow. A 1% change in recession will discourage FDI inflow by 0.011% ($P > 0.9886$) and 0.015 ($P > 0.9886$) in both short run and long run, similar to the impact of economic growth on FDI inflow. Thus, this study suggests sound economic planning coupled with strong management institution as way of achieve stable macroeconomic environment for investment purpose in addition to economic diversification which will help diversify FDI inflow too.

Keywords

Economic growth, FDI, trade openness, industrialization, oil price, economic, economic recession

JEL Codes: F15, F43, F3, O14

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1. Introduction

Traditionally, it is believed that FDI inflow into a region or any economy is not automatic, but depends on certain critical factors and the type of investment demand as well as the absorptive capacity of the recipient country Kinda (2013). The study submits that vertical FDI inflow is attracted into an economy through efficient human capital and adequate financial development, while horizontal FDI is determine by adequate infrastructure and strong institutions. It follow logically that a country with better and improve financial market, adequate infrastructure, strong institutions couples with quality educational system aimed at improving or training human capital will induce persistence FDI inflow. The work of Fukao & Wei (2008) supports the idea that Market size is the determinant of horizontal FDI, while labor cost is a key driver of FDI inflow. Furthermore, the study of Oladipo (2010) revealed that the FDI inflows into Nigeria are strongly connected to the country potential market size, export encouragement, human capital, infrastructure and macroeconomic stability. The study of Onyeiwu & Shrestha (2004) carry out on selected African countries with Nigeria inclusive found that the main promoters of FDI inflow to Africa are GDP, inflation, trade openness, external reserves and natural resources, while the traditional factors such as political right and infrastructure were found to be irrelevant in attracting FDI inflow to Africa. According to Udo & Egwaikhide (2008) FDI inflow to Nigeria is discouraged by exchange rate and inflation fluctuation, while infrastructure, openness and the public sector are the determining factors for attracting FDI inflow. According to Nurudeen *et al.* (2011), openness, privatization, infrastructure improvement and exchange rate promotes FDI inflow in a significant level, while market size influence FDI inflow negatively at a significant level. Inflation on the other hand exhibits insignificant favourable impact on FDI that flows into Nigeria.

However, until of recent, Nigeria has been the gate way of FDI inflows into Africa (UNCTAD, 2012). The report further indicates that Nigeria achieved the highest FDI inflow in the continent, amounting to about \$8.92- billions in 2012, closely followed by South Africa. However, in recent time the current persistence economic depression for which the Nigeria economy is suffering from its bi-product of low demand is presumed to be one of the major causes of the sharp fall in FDI inflows into the West African region (UNCTAD, 2018). Thus, the low demand causes many consumer-based companies most of which are from South Africa to exit the country leading to relative consequence in the reduction of FDI inflow to

Nigeria by 21 percent to 3.5billions in 2018 (UNCTAD 2018). In the same period there was sharp fall in global oil price which coincided with a significant reduction in the FDI inflow into Nigeria. Besides, the empirical evidences from the extant literatures (Ojong *et al.* 2015; Ebiringa & Emeh 2013; Nurudeen *et al.* 2011; Wafure & Nurudeen 2010; Udo & Egwaikhide 2008) are far from consensus. This prompts research questions such as: firstly, does the recent global oil price shock in 2015 exerts adverse effect on the attraction of FDI inflow to Nigeria?. Secondly, what is the effect of the recent economic depression of 2015 in determining FDI inflow into Nigeria?. Thus, this study seeks to revisit the subject matter by providing empirical answers to the aforementioned questions. To achieve this, this study seeks to introduce Dummy variable into the model to represent the economic recession of 2015. The rest of the study consist of the literature review which follow this section, the theoretical framework, results and interpretation and a conclusive remarks and recommendation.

2. Theoretical and empirical literature review

There are theories that explain why FDI flow from one economy to another. First, the modernization theory as developed by Parsons (1945) argued that the basis for cross board FDI inflow is connected with the difference in the level of developmental attainment among the nations of the world. Thus, international interaction between the developed and the emerging economies is a way of assisting the later to achieving structural transformation of the primitive society to modern form through the adoption of the advanced technology flowing from the developed nations. The dependency theory credited to Prebisch (1960) on the contrary, views FDI inflow as a way of repatriation of the local technology from the emerging economies to the developed ones. Solow growth model which an extension of the Harrod-Domar simply stresses the important role of saving, population growth and technical progress in promoting the gross national product (GNP) and growth of a nation over time (Odishika, 2017). Thus, the applicability of the Solow model to this study is informed by the fact that model acknowledge key role of exogenous variables flowing into an economy such as FDI in the form of technology.

Empirical literatures abound proving different factors that determine the inflow of FDI into the host economy. For instance Joshua *et al.* (2020) investigate the relationship between FDI inflow and GDP through the granger causality in the case of South Africa. The revelation shows that natural resources rent drives FDI inflow. This is contrary to the study of Joshua (2019). The study found a non-causal effect between FDI inflow and economic expansion in Nigeria. According to Kinoshita & Campos (2003) lower labour cost and adequate natural resources are the key promoters of FDI inflow. The work of Asiedu (2002) submits that the main determinants of FDI that flows to the sub-Saharan African economies are infrastructure improvement and trade openness, while large profitability demonstrates insignificant attraction to FDI unlike the non-sub-Saharan African countries which attracts FDI through high investment return. According to Asiedu (2006), the key promoters of FDI inflow into Africa are the GDP size in the host country, abundance natural resources, improved infrastructure, manageable inflation rate, good legal system and functioning investment environment as opposed by corruption and political unrest. The study of Ayanwale (2007) lent to support to work of Asiedu (2006). The findings of the study revealed that the drivers of FDI inflow to Nigeria include market size and better infrastructure. The study of Nunnenkamp (2002) revealed that the market factor still retain its domineering position as the promoter of FDI coupled with efficient domestic skills. Accoring to Raluca & Alecsandru (2012) the choice of Romanian as the destination of FDI is closely connected to the emerging local market, efficient skill labour, infrastructure and low wage rate. Hunady & Orviska (2014), carry out a study on the EU countries and finds that FDI is attracted to the region through labour cost, trade openness, firing costs, GDP per capital and public debt, whereas, corporate taxes is of no effect in attracting FDI. The study of Antonescu (2015) reveals that the promoters of FDI into EU and Romania regions are the local firms and the sectoral/regional characteristic.

Similarly, Kinuthia & Murshed (2015) carry out a comparative study between Kenya and Malaysia on the subject matter. Their findings reveals that wage, exchange rates and democracy are the factors that account for FDI inflow to Kenya, while deficiency in trade openness, infrastructure, weak governance/financial development, and unstable rate of inflation does not encouraged FDI inflow in the Kenya. The study concludes that the case of Malaysia is a direct opposite of Kenya. The study of Tintin (2013) submits that FDI inflow into the six central eastern European countries responds to GDP size, trade openness, EU membership and institution. The findings from the work of Boateng *et al.* (2015) prove that factors such as real GDP, exchange rate and international trade asserts positive influence on FDI inflow, whereas money supply, inflation, unemployment and interest rate causes significant opposite impact in Norway. In the case of Malaysia, the study of Tang *et al.* (2014) proves that GDP, real exchange rate, financial development, promote FDI inflow into the electrical and electronic industry. The work of Chidlow *et al.* (2009) submits that labour skill development, domestic market and agglomeration induces FDI inflow into Mazowieckie, while efficiency and locational factors encourage the inflow of FDI into the other part of Poland as supported by the work of Villaverde & Maza (2015) in the case of the European regions. Chan *et al.* (2014) stressed that the promoters of FDI in China under the period of the investigation was majorly the size of GDP, while domestic infrastructure and investment exerts indirect impact in driving FDI inflow. Bilgili *et al.* (2012) in the case of Turkey

submits that FDI growth is influenced by the country GDP growth rates, labour cost, export and import growth, steam coal and natural Gas among others. In the case of Malaysia, the findings revealed that infrastructure promotes FDI inflow significantly to augment the traditional factors like labour cost according to Mat *et al.* (2012). Findings in the recent study still in the case of Malaysia carry out by Mugableh (2015) prove that exchange rate, GDP, broad money supply and trade drive FDI inflow accordingly. The study of Jadhav (2012) revealed that economic factor like natural resource is more relevant in attracting FDI inflow than the political and institutional factors in Brazil, Russia, India, China and South Africa. The study of Oladipo (2010) revealed that inward FDI in Nigeria are strongly connected to the country potential market size, export encouragement, human capital, infrastructure and macroeconomic stability. Additionally, Onyeiwu & Shrestha (2004), maintain that the promoters of FDI inflow to Africa are economic growth, inflation, trade openness, external reserves and natural resources, while the traditional factors such as political right and infrastructure were found to be irrelevant in attracting FDI inflow to the continent. The study of Na & Lightfoot (2004) submits that the essential driver of FDI inflow to China includes openness, human capital development and infrastructure. The study of Kalotay & Sulstarova (2010) on the outward FDI of Russian revealed that factors such as natural resources and market size in the recipient countries are responsible for the attraction FDI inflow from Russia. The study of Udo & Egwaikhide (2008) revealed that exchange rate and inflation unrest discourages FDI inflow to Nigeria, while infrastructure, openness and the public sector size are key factors for attracting FDI inflow. The study of Babatunde (2011) submits that openness and GDP per capital are strong determinants of FDI in the sub Saharan Africa. According to Nurudeen *et al.* (2011), openness, privatization, infrastructure improvement and exchange rate exert significant positive impact on the FDI inflow, while market size influences FDI inflow negatively at a significant level. Inflation on the other hand exhibits insignificant positive impact on FDI inflow in Nigeria. The study of Singhania & Gupta (2011) submits that the promoters of FDI inflows to India are GDP, inflation rate and scientific research. Wafure & Nurudeen (2010) submit that market size, deregulation, political instability and exchange rate depreciation are responsible for the attraction of FDI inflow to Nigeria.

3. Methodology of research

This study seeks to investigate the determinants of FDI inflow into Nigeria which covers the period of the recent recession and global oil price shock. Some study (Hunady & Orviska, 2014; Tintin 2013; Boateng *et al.*, 2015) asserts that economic growth traditionally serve as a major determinant of FDI and vice versa. While other study submits that industrialization and trade openness serve as drivers of FDI inflow (Asiedu, 2002). Thus, the theoretical setting of the study follows that economic growth, industrialization, and trade openness should promote FDI inflow positively. In addition, the study included the global oil price to the model as a control variable considering the fact that Nigeria economy depends almost ultimately on the oil resources. Thus, including the oil price in the function model for Nigeria serves as a point of divergence of this study from the previous studies (Ojong *et al.*, 2015; Nurudeen *et al.*, 2011; Udo & Egwaikhide 2008) and to avoid the omission of important variable. Thus, the mode is express in the form:

$$fdi_t = h + \lambda gdp_t + \delta ind_t + \mu to_t + \sigma op_t + \varrho exr_t + \varpi D \quad (1)$$

Where fdi stand for foreign direct investment as net inflow (% of GDP), h represent constant parameter, gdp represent economic growth (constant 2010, US\$), ind stands for industrialization, to represents trade openness as % of GDP, op represents oil price, exr represents exchange rate official rate, D represent the Dummy variable and $\lambda, \delta, \mu, \sigma, \varrho, \varpi$ are the coefficient of $fdi, gdp, ind, to, op, exr$ and D .

This study depends on the annual data stretching from 1970 to 2018. The variables are foreign direct investment (FDI), economic growth (GDP), industrialization (ID), oil price (OP), and trade openness (TO) all of which are obtain from the World Bank data base, 2018.

3.1. Unit root tests

This study employ the traditional ADF and PP unit root tests to ascertain the stationarity of the series since it is generally assumes that time series data mostly exhibit non-stationarity at level Gujarati (2009). ADF and PP capture higher order autoregressive process and controlling of higher order correlation respective as stated below:

$$\Delta Y_t = \beta_1 + \beta_2 + \delta Y_{t-1} + \sum_{i=1}^n \alpha_i \Delta Y_{t-1} + \varepsilon_t \quad (2)$$

3.2. Bounds test to level relationship

This study adapted the ARDL bound test to co-integration as developed by Pesaran, Shin, and Smith (2001) which is flexible and suitable to be use irrespective of the order of integration of the series (Katircioglu *et al.*, 2016). Thus, equation one is estimated through:

$$\Delta \ln FDI_t = a_0 + \sum_{i=1}^m b_i \Delta \ln FDI_{t-1} + \sum_{i=1}^m c_i \Delta \ln GDP_{t-1} + \sum_{i=1}^m d_i \Delta \ln ID_{t-1} + \sum_{i=1}^m e_i \ln TO_{t-1} + \sum_{i=1}^m f_i \ln OP_{t-1} + \sum_{i=1}^m f_i \ln EXR_{t-1} + \sum_{i=1}^m f_i \ln D_{t-1} + \sigma_1 \ln FDI_{t-1} + \sigma_2 \ln GDP_{t-1} + \sigma_3 \ln ID_{t-1} + \sigma_4 \ln TO_{t-1} + \sigma_5 \ln OP_{t-1} + \sigma_6 \ln EXR_{t-1} + \ln D_{t-1} \tag{3}$$

Where Δ is the difference operator, and ε_t is the serially independent random error with a mean zero and a finite covariance matrix (Katircioglu *et al.*, 2016). Conclusively, the F-test statistic approach was employed by this study to examine the single long-term relationship as specified in equation 4, Pesaran *et al.* (2001). Thus, the null hypothesis of a no-long-run relationship is $H_0 : \sigma_1 = \sigma_2 = \sigma_3 = \sigma_4 = \sigma_5 = \sigma_6 = \varpi_7 = 0$, while the alternative hypothesis of long run relationship is $H_1 : \sigma_1 \neq \sigma_2 \neq \sigma_3 \neq \sigma_4 \neq \sigma_5 \neq \sigma_6 = \varpi_7 = 0$. After establishing the evidence of cointegration between the variables, the following long run model formulated:

$$\Delta fdi_t = h + \sigma fdi_{t-1} + \sigma gdp_{t-1} + \sigma ind_{t-1} + \sigma to_{t-1} + \sigma op_{t-1} + \sigma exr_{t-1} + \varpi D_{t-1} + \varepsilon_t \tag{4}$$

The lag orders of the variables are selected by using the appropriate Akaike information Criteria (AIC) or Schwarz Bayesian Criteria (SBC) to determine the optimal structure for the ARDL specification. Following the estimation of the ARDL long run multiplier, the following error correction model is formulated in order to estimate the short run dynamics:

$$\Delta fdi = h + \sum_{i=1}^p a_{1i} \Delta fdi_{t-1} + \sum_{i=1}^p a_{2i} \Delta gdp_{t-1} + \sum_{i=1}^p a_{3i} \Delta ind_{t-1} + \sum_{i=1}^p a_{4i} \Delta to_{t-1} + \sum_{i=1}^p a_{5i} \Delta op_{t-1} + \sum_{i=1}^p a_{6i} \Delta exr_{t-1} + \sum_{i=1}^p a_{7i} \Delta D_{t-1} + \Omega ECM_{t-1} + \varepsilon_t \tag{5}$$

$a_{1i} - a_{7i}$ represent the short run parameters and Ω is the speed of adjustment parameter which is expected to be less than zero. ECM is the lagged error correction term obtained from the estimate cointegration model.

5. Empirical findings and interpretation

Table 4 represents the findings from the stationarity test via the traditional tools of Augmented Dickey Fuller (ADF) and Phillip and Perron (PP) tests. The result from ADF shows that at level only FDI and OP were proved to be stationary at level, while other series became stationary at first difference. For the PP unit root test, only industrialization (IND) and oil price (OP) were found be stationary at level, while the other series achieved stationarity at first difference. The overall result from both tests connotes a case of mixed order of integration. Thus, the dynamic ARDL bound test is suggested to be adopted by this study as the most suitable method of estimation. Table 3 represents the findings from the diagnostic tests which prove that the model is pure and normally distributed homoscedastic and no case of serial correlation. The Ramsey reset test indicates the dynamic and well specified nature of the model.

Table 1. Unit Root Test

Variable	Dickey-Fuller Test					Philip-Perron				
	Level	Prob	1st diff.	Prob	Result	Level	Prob	1st diff.	Prob	Result
LnFDI	-3.348	0.0013	-10.698	0.0000	I(0)	-3.133	0.0024	-10.99	0.0000	I(1)
lnGDP	2.3914	0.9953	-4.3891	0.0000	I(1)	2.8998	0.9988	-4.571	0.0000	I(1)
LnIND	0.6614	0.8545	5.1432	0.0002	I(1)	-4.561	0.0043	5.134	0.0000	I(0)
LnTO	-0.053	0.6598	-7.4310	0.0002	I(1)	0.0576	0.6585	-7.407	0.0000	I(1)
lnOP	-2.902	0.0525	-6.1132	0.0000	I(0)	2.9025	0.0525	-6.106	0.0000	I(0)
lnEXR	1.036	0.9287	-4.224	0.0001	I(1)	3.4796	0.9998	-4.222	0.0001	I(1)

Source: Author’s Computation

The CUSUM and CUSUM of square statistics as present in figure 1a and 1b revealed the correct fitness into the critical bounds representing the case of stability as supported by Joshua & Bekun (2020). This indicates that the model is well specified and fitted for policy guide and direction in the study area. Finally, for the purpose of estimating the relationship between the variables, optimum lag length was used to determine the lag length structure. Thus, the outcome from the lag length criteria proved that lag one is most appropriate lag length for the study because there was not conflict of interest between all the criteria (LR, FPE, AIC, SC and HQ).

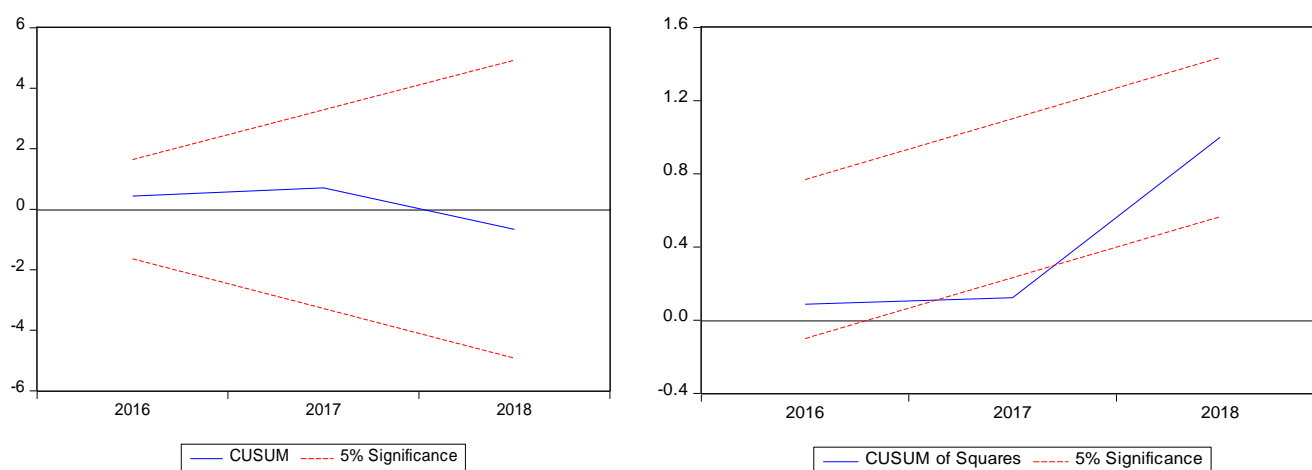


Figure 1. Stability tests (a) Cumulative Sum of Recursive Residuals and (b) Cumulative Sum of Squares of Recursive Residual

Table 2. Optimal Lag Length Criteria

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-177.6151	NA	9.00e-05	10.54944	10.86050	10.65682
1	28.27979	317.6664*	1.22e-08*	1.584012*	4.072569*	2.443061*
2	66.57636	43.76751	3.21e-08	2.195637	6.861681	3.806354
3	117.1914	37.59972	9.08e-08	2.103350	8.946882	4.465736

Source: Author’s Computation

Table 2 reports the findings from the long run level relationship coefficient from the ADRL bound test. The result revealed that economic growth asserts a negative and insignificant impact on FDI inflow which implies that the rate of economic growth achieve in Nigeria militates against the attraction of FDI inflow. Thus, a 1% change in economic growth (market size) will cause an inelastic setback for attracting FDI inflow by about 1.784% ($P > 0.2150$) and 2.430% ($P > 0.2384$) in the short run and long run respectively. The magnitude of the coefficients indicate that the respond of FDI inflow to change in GDP is elastic which implies that for every slight unit change in economic growth will lead to more than proportional fall in FDI inflow into the economy. This may be connected with the recent recession because recession itself is a signal for a slowdown in economic growth which is reasonable enough to scare foreign investors away. The outcome out rightly invalidating the works of Ojong *et al.* (2015) and Wafure & Nurudeen 2010 for Nigeria. The different in the findings may be attributed to factors such as variation in data set and time frame.

On the other hand, a 1% changes in industrialization will cause a 4.597% ($P > 0.0828$) and 0.204% ($P > 0.9557$) decrease in FDI inflow in the short run and long run. This indicate that the respond of FDI inflow to change in industrialization is significantly elastic in the short run which implies that for every slight unit change in industrialization will lead to more than proportional fall in FDI inflow into the economy. The impact turned out to be insignificant in the long run. The economic recession of 2015 represented by (D) exhibits negative impact on FDI inflow as expected and in line with economic intuition which posits that a recession will scare away investors. A 1% change in the recession will cause discourage FDI inflow by 0.011% ($P > 0.9886$) and 0.015 ($P > 0.9886$) in both short run and long run. The immediate impact of the recession was observed through the sharp fall in demand which forced several consumer based firms particularly those ones from South Africa to exit the economy as reported by (UNCTAD, 2018). Trade openness, demonstrate a positive and significant influence over FDI inflow in the short and long run as expected. A 1% change in openness will promote FDI inflow by 0.609% ($P > 0.0762$) and 0.830% ($P > 0.0679$) in both short and long run. This implies that more the economy is liberalized the more economic growth will be achieved in the economy and vice versa validating the work of Ojong *et al.* (2015) for

Nigeria and Asiedu (2002) and Onyeiwu and Shrestha (2004) for the developing economies. Oil price exhibit positive and weak impact on FDI inflow. A 1% change in oil price will improve FDI inflow by 0.721% ($P>0.1374$) and 0.983% ($P>0.1839$) in both short run and long run contrary to our apriori expectation. This implies that the fall in FDI inflow was not traceable to the fall in oil price which may be due to the fact that oil drilling is a long term project, therefore, temporary shocks like the recession may have little or no effect on the FDI flowing to the sector. Furthermore, the findings show that exchange rate play positive role in attracting FDI inflow. A 1% change in exchange rate will cause a 0.004% ($P>0.2558$) and 0.006 ($P>0.2854$) increase in FDI inflow. This means that FDI inflow will improve when exchange rate decreased. Table 2 present the error correction term (ECT) of 73% which represent the speed of adjustment. This implies that it will take the speed of 73% for the series to converge in the long run after correcting the disturbances in the short run. The negative sign show co-movement between the variable of interest in long run.

Table 3. ARDL regression with short-range and long-range equilibrium relationship

	Δ L/GDP	Coef.	Std. err.	t-stat.	P > t
ADJ	ECT(-1)	-0.734***	0.123	-5.951	0.0000
SR	LnGDP	-1.784	1.401	-1.273	0.2150
	LnIND	-4.597*	2.539	-1.810	0.0828
	LnTO	0.609*	0.329	1.853	0.0762
	LnOP	0.721	0.469	1.536	0.1374
	LnEXR	0.004	0.003	1.164	0.2558
	D	-0.011	0.737	-0.015	0.9886
LR	LnGDP	-2.430	2.010	-1.209	0.2384
	LnIND	-0.204	3.629	-0.056	0.9557
	LnTO	0.830*	0.434	1.912	0.0679
	LnOP	0.983	0.718	1.368	0.1839
	lnEXR	0.006	0.005	1.093	0.2854
	D	-0.015	1.003	-0.014	0.9886

Notes: ADJ denotes the error correction term, LR is the long-run estimation, where SR is the short-run estimates.

***, **, * Stand for 1, 5, and 10 percent respectively.

Table 4. Diagnostic Tests

Tests	F-statistic	Prob. Value	
Normality test	0.409	0.8150	
χ^2 SERIAL	0.788	0.4668	F(2,22)
χ^2 WHITE	1.347	0.2623	F(10,24)
χ^2 RAMSEY	0.802	0.3796	F(1,23)

Source: Author's Computation

Table 5. ARDL bound test

Bound	10%		5%		1%		F/Statistic
	I(0)	I(1)	I(0)	I(1)	I(0)	I(1)	
F	1.99	2.94	2.27	3.28	2.88	3.99	3.428

Note: Authors Computation

Table 5 presents the result from the dynamic TY causality test which shows a non-causal effect between FDI inflow and the regressors. This means that none of the series are predictor of FDI inflow into the country contrary to our earlier expectation. The finding shows a one way drive running only from oil price (OP) and economic recession (D) to GDP and a feedback interaction between FDI inflow trade openness (TO) and GDP. This signifies that trade openness; economic recession and oil price are predictors of economic growth in the period under review. The bidirectional link between economic growth and trade openness signifies that economic growth could predict the liberalization of the economy of Nigeria. The result further revealed a unidirectional link running only from GDP and D to IND which implies that the economic growth and recession could drive industrialization in Nigeria. In essence, economic growth will promote the course of industrialization while recession is likely to weaken industrial advancement. Finally, the result prove that economic recession will drives exchange rate as indicated by the unidirectional link running only from recession to e exchange rate.

Table 6. TY Granger Results

Excluded	Chi-sq	df	Prob.
Dependent variable: LNFDI			
LNGDP	1.516	1	0.2181
LNIND	0.058	1	0.8088
LNTO	0.001	1	0.9731
LNOP	0.352	1	0.5528
EXR	0.064	1	0.7992
D	0.045	1	0.8307
All	3.727	6	0.7135
Dependent variable: LNGDP			
LNFDI	0.444	1	0.5051
LNIND	0.073	1	0.7860
LNTO	3.079*	1	0.0793
LNOP	2.727*	1	0.0986
EXR	0.593	1	0.4412
D	5.077**	1	0.0242
All	11.326*	6	0.0788
Dependent variable: LNIND			
LNFDI	0.003	1	0.9544
LNGDP	2.759*	1	0.0967
LNTO	1.302	1	0.2538
LNOP	0.758	1	0.3838
EXR	0.273	1	0.6008
D	5.618**	1	0.0178
All	12.022*	6	0.0615
Dependent variable: LNOP			
LNFDI	0.148	1	0.7004
LNGDP	0.143	1	0.7050
LNIND	1.941	1	0.1636
LNTO	0.264	1	0.6070
EXR	1.955	1	0.1620
D	3.380*	1	0.0660
All	9.287	6	0.1580
Dependent variable: LNTO			
LNFDI	0.036	1	0.8476
LNGDP	4.144**	1	0.0418
LNIND	2.287	1	0.1304
LNOP	0.152	1	0.6958
EXR	0.339	1	0.5603
D	1.063	1	0.3025
All	6.323	6	0.3880
Dependent variable: LNEXT			
LNFDI	0.837	1	0.3602
LNGDP	0.739	1	0.3898
LNIND	1.309	1	0.2526
LNTO	0.005	1	0.9421
LNOP	2.393	1	0.1219
D	3.417**	1	0.0645
All	16.563**	6	0.0110
Dependent variable: D			
LNFDI	0.064	1	0.8002
LNGDP	0.434	1	0.5099
LNIND	0.392	1	0.5310
LNTO	0.043	1	0.8343
LNOP	0.798	1	0.3716
EXR	0.080	1	0.7767
All	1.714	6	0.9440

Note: significance at ***0.01, **0.05 and *0.1

6. Conclusions and recommendations

This study seeks to investigate the determinants of FDI inflow to Nigeria with a specific focus on oil price and economic recession as control variables considering the centrality of the oil sector to the economy of Nigeria and the recent decline in the global oil price. The findings revealed that economic growth exerts insignificant negative impact on FDI inflow in contrast to the work of Udo and Egwaikhide (2008) in the case of Nigeria as well as (Onyeiwu & Shrestha 2004; Oladipo, 2010) in separate studies. Similarly, the findings also prove that the recession of 2015 influences FDI inflow negatively, while oil price did not. The government could intervene in the case of recession through increased government expenditure in order to raise back the falling demand. In clearer terms, economic planning must be strengthened through concerted effort to complement strong management institutions in an attempt to stabilize macroeconomic performance thereby resulting to investment-friendly environment. This will in no doubt attracts new potential firms and boost the confidence of the existing foreign companies for continuity.

Additionally, globalization is crucial for the attraction of FDI into the economy. Hence, this study warns against anti-free trade policies. The government must be ready to liberalize the economy more and more in order to attract more foreign investors. Moreover, the government could strengthen the existing trade liberalization by putting in place measures such as free license for operation, corporate tax holidays and free operational license as an incentive packages to woo foreign investors.

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