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Environmental Quality and Growth Effects of Foreign Direct Investment in Nigeria

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Abstract

The study examines the growth effects of foreign direct investment on environmental quality in Nigeria between 1970 and 2013. Variables like per capita income, environmental degradation, foreign direct investment, human capital, inflation, trade openness, interest rate, and the interaction term between foreign direct investment and carbon emission were employed in the study. A long run relationship was observed among the variables and foreign direct investment and environmental degradation negatively enhanced growth individually, while the interaction variable positively enhanced economic growth. The study concludes that environmental consideration does not really matter in growth consideration in Nigeria but that carbon emission must not exceed the 67.4% threshold if the economy is to benefit from the interaction between foreign direct investment and carbon emission. Policy makers are encouraged to strike a balance between the quantity of emissions and the amount of economic growth that is suitable for the country since the decision to maintain green growth by developing countries is not an easy one to make.

Keywords: Environment, Economic Growth, Threshold, Foreign Direct Investment, Nigeria.
JEL Classification: F18, F21, O12.

1. Introduction

Experiences and reality in many countries with friendlier green environment and less carbon emission has shown a high significant correlation with better living standards and improved the life expectancy of the citizenry, (Chung, 2014). However, Empirical studies had in contrary showed that dirty industries from developed countries are found of relocating their operations

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to less developed economies where environmental laws are much relaxed in an attempt to circumvent strict environmental ideologies (Blomquist & Cave, 2008). In the 1990s, environmental laws were made very strict among most developed countries. Owing to these stringent environmental laws, research attention has therefore shifted more towards establishing pollution haven hypothesis (PHH) in different country and socioeconomic contexts. The PHH argues that environmental severity dissimilarities existing among advanced and less developed economies enable third world countries to specialize in the production of "dirty" goods. It thus implies that if the polluter haven hypothesis holds, developed nations will in the long run experience an increase in the importation of "dirty" goods from less developed countries, during the period of strict environmental laws (Blomquist & Cave, 2008).

A very important issue which emerged due to the recent trends in globalization is the issue of trade-environment competitiveness (Letchumanan & Kodama, 2000). In the thinking of the classical economists, free trade is expected to increase the migration of many carbon emitting industries from the developed world to less developed countries with weak environmental laws. It thus follows that the moves to bring restrictive trade practices into discussions at several bilateral and multilateral trade, business and environmental initiatives will damage further the world's environmental welfare and also polarizes the patterns of international trade and investment. Moreover, such trade restrictiveness can also inhibit the foreign direct investment (FDI) flow that is being increasingly relied upon by many developing countries for the acquisition and upgrading of their technology, thereby adversely affecting national technology development initiatives.

The quest to ensure technology transfer, from developed to developing countries, and also earn foreign exchange necessitates developing countries' efforts at opening up trading opportunities with several other nations. When inappropriate technologies are transferred via FDI or trade openness, environmental quality can become weakened. This means that foreign direct investment contributes significantly to the level of emission in an environment (Copeland & Taylor, 1994; 2004). In Nigeria, for instance, it has been affirmed that FDI inflows fuelled the level of carbon emission per capita (Eregha & Nwokoma, 2014). Opening up an economy to free trade has the potential to act as a catalyst to the level of carbon emission when environmental goods are consumed, and can also intensify the size of global trade that can in-turn deteriorate the quality of the environment. In the same vein, composition effect can make less developed economies to attract highly pollution-emitting plants, which more advanced economies are to

avoid in a quest to attract foreign direct investment (Copeland & Taylor, 2004). Studies have shown that the level of income increases in a country, both land and air pollution tend to rise also (Isola & Mesagan, 2014).

This empirical study contributes to existing literature by analyzing the role of FDI in the nexus between environmental quality and economic growth. It also determines the relationship between FDI and economic growth while also analyzing the interaction between FDI and carbon emission with the aim of determining the effect this interaction has on economic growth. This is to fill a gap that previous studies such as Copeland and Taylor (1994), He (2006), Omojolaibi (2010), Saibu (2012), Eregha & Nwokoma (2014), & Ayadi (2014) overlooked in their studies. The study also goes further to calculate the threshold level of emission that will be acceptable in the economy to enable us determine the full impact of carbon emission on economic growth. This signifies a major contribution of the study to existing literature. The nexus between growth, environment and FDI stems from two perspectives: pollution haven hypothesis and the EKC (Blanco et al., 2013). The analysis is carried out using carbon dioxide emission from manufacturing industries and construction which form a large chunk of FDI inflow into Nigeria.

2. Literature Review

2.1 Theoretical Review

There strands of theoretical studies that have been able to foreign direct investment to the level of environmental quality among countries of the world. It is believed that the entry of foreign direct investment into a country has some implications for the environment. Some of these theoretical studies include: the pollution haven hypothesis, race to the top theory, and race to the bottom theory (Gray, 2002; Greaker, 2007). The "Pollution Haven" hypothesis suggests that foreign investors will seek to locate their industries in other countries where operations will be cheaper in terms of cost and also in terms of weak environmental regulatory requirements. The pollution haven is of the opinion that high environmentally unfriendly industries in the North will relocate to the South to take advantage of weak environmental regulations, thereby leading to "polluter haven" in these developing countries (Chichinisky, 1994; Gray, 2002; Eskeland & Harrison, 2003; Cole, 2004; Greaker, 2007; Eregha & Nwokoma, 2014). It thus implies that human life and health care status of people in countries with lax environmental regulations will suffer greatly even as their economy witnesses improve growth in investment.

Another closely related theory to the pollution haven in focusing on the

role of foreign direct investment on the environment is the "Race to Bottom" theory. Race to the bottom theory suggests that government deliberately on their own steps down environmental standards in an attempt to attract foreign investment (Baumol & Oates, 1988; Gray, 2002; Greaker, 2007). It is believed that governments do this to promote growth at the early stage of their development and when the country becomes wealthy and financially stable, they can now step up their environmental standards and control emissions better. This is in synch with the proposition of the Environmental Kuznets Curve (EKC) that an inverted U-shape relation exists between environmental degradation and economic growth (Dasgupta et. al, 2002; with pollution or other forms of degradation and emission rising in the early stages of economic development and falling in the later stages as per capita income rises. The other contrary theoretical argument against Pollution Haven and Race to the Bottom is the "Race to the Top" theory which states that governments do not have to lower their environmental standards to attract foreign direct investment. As postulated under the Porter Hypothesis, stronger environmental regulations can promote competition in the market place to foster high innovation and efficiency thereby attracting investors, both local and foreign. This is also known as the "Pollution Halo" theory (Gray, 2002; Copeland & Taylor, 2004).

2.2 Empirical Review

In economic literature, there are plethora of studies on foreign direct investment and the environment. Some of these studies such as Crocker (1966), Baumol (1971), Eskeland and Harrison (2003) focused on the environment. Several other studies like Panayotou (1993), Arrow *et al* (1995), Stern *et al* (1996), Alstine & Neumayer (2009), Kearsley & Riddel (2010) focused on the relationship between economic growth and environmental degradation. In a study conducted by Panayotou (1993), it was suggested that a U-shaped relationship exists between environmental degradation and economic growth or per-capita income. This is what has been termed in literature as environmental Kuznets curve (EKC). He (2006), Chung (2014), & Neequaye and Oladi (2015) focused on foreign direct investment and the environment.

Letchumanan and Kodama (2000) focused on how to reconcile the conflict between the PHH and the trajectory of international transfer of technology. It affirmed that various developing countries of the south have heavily relied on technology transfer in the form of FDI from developed countries at the centre as a primary means for boosting their technological base. They observed that the challenge posed by the recent increase in global

economic consciousness which link investment and trade with environmental issues can potentially upset the flow of investment. In light of this, the study investigated the validity of the PHH from the perspective of neo-technology trade. It established in the process, an evolving trajectory of international transfer of technology that favours highly technological industries. It was resolved that positive measures enhancing foreign direct investment is very important for technological upgrade, and that it incorporates enhanced environmental welfare via the transmission of economically friendly products as well as safe production processes.

Eskeland & Harrison (2003) presented evidence on whether multinational companies flock to developing nations owing to their weak environmental laws. The study examined the pattern of FDI in four third world countries of Morocco, Mexico, Cote d'Ivoire and Venezuela to enable it account for country-specific factors that might affect the pattern of foreign investment in these countries. However, a weak evidence that foreign investors locate in sectors with high levels of air pollution was observed and when the study then examined whether foreign firms produce less emission than their peers. It was revealed that foreign industries are more energy efficient than their peers and that they employ cleaner types of energy too.

Cole & Fredriksson (2009) studied institutionalized pollution havens. It was affirmed that the effect of FDI on environmental policies depends on the structure of the political institutions (say, veto players or the legislative arm) in the receiving countries. The study also observed that foreign direct investment increases environmental policy stringency where there is a large number of a legislative unit but decreases when the legislative units are few. When treated as endogenous variable, the study observed that environmental policy significantly and negatively enhanced foreign direct investment.

Kearsley & Riddel (2010) conducted an inquiry into the PHH and the EKC. According to the study which was conducted for seven often studied pollutants, emission reductions that were observed in advanced economies are due to the act of transferring of "dirty" goods producing firms to developing countries with weak environmental policies. The result of the study also suggested that trade openness did not generally correlate with higher emission levels and that dirty imports are statistically uncorrelated with higher level of emissions.

Al-mulali and Tang (2013) employed fully modified OLS to investigate if the PHH is valid in the Gulf Cooperation Council (GCC) nations. It however found that the inflows of FDI negatively correlate with carbon emission in the long run. Similarly, Cole and Elliott (2005) employed the random and fixed panel models to analyze the impact of foreign direct investment on

pollution in Brazil and Mexico. The study observed that foreign direct investment positively and significantly impacted the level of pollution in the two countries. In the same vein, He (2006) looked at environmental impact of foreign direct investment in Chinese provinces. It employed a simultaneous equation model to look at the nexus between foreign direct investment and emission. The study observed that foreign direct investment inflow has a positive effect on Sulphur emission in China.

Chung (2014) enquired into how environmental regulation has helped to shape the FDI pattern in South Korea through an assessment of the PHH. The study examined the pattern of South Korean foreign direct investment from 2000 to 2007, due to the contradictory results observed in most of the developed economies, as a result of the restrictive impact of clean technology adoptions on industry relocation and the need to lessen the effect of clean technology. It found support for the fact that pollution emitting industries do increase their investment in countries with relaxed environmental laws.

Eregha & Nwokoma (2014) researched into the relationship between FDI and the environment in the West African Monetary Zone using the fully modified and dynamic OLS approach. It is reported in the study that high polluting industries in more advanced countries relocate to less developed countries to take full advantage of weak environmental laws, thereby leading to the emergence of "polluter haven" and life quality in these countries. It therefore calls for WAMZ countries to encourage Multinationals to pay adequate attention to the use of efficient technology to enhance output which translate to environmental improvement low cost per unit.

Neequaye & Oladi (2015) studied effects of FDI inflows and the disbursements of environmental aid on environmental degradation. The study which employed a panel analysis for some selected developing countries suggested the existence of an EKC for carbon dioxide as well as total greenhouse gas emissions from both the energy and industrial sectors but also observed that there was no evidence of the EKC for nitrous oxide and total greenhouse gas emissions from the waste sector.

2.3 Stylized Facts

Figure 1a and 1b show the growth in the inflow of foreign direct investment and emissions into Nigeria between 1970 and 2013 and this suggests that FDI inflows has been on the rise since the 1970s till date with only intermittent decline at some points. Between 1970 and 1978, the growth in FDI was fairly stable vis-à-vis an increase in emission during the same period. This can be attributed to the need to reconstruct the economy after

the civil war which made the administration of Gen. Yakubu Gowon to seek some foreign assistance.

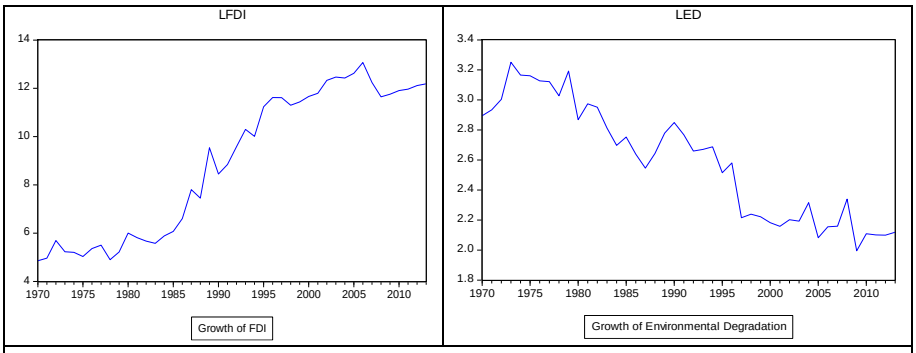

Fig. 1a &b: Trends of Foreign Direct Investment and Environmental Degradation Measure

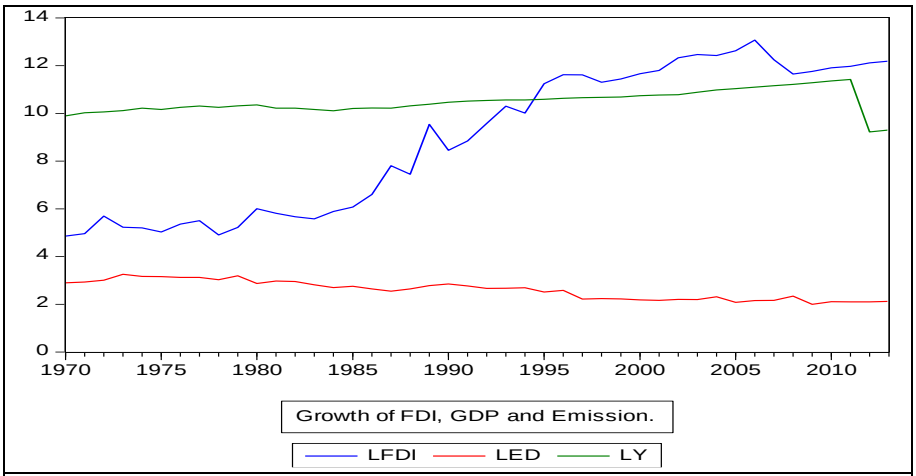

Fig. 2: Trend of FDI, Environmental Degradation(LED) and Economic Activities (LY)

Most of the inflow then came in the form of foreign oil companies' activities who took advantage of the need of the country to explore Nigeria's crude oil without much attention to the taming of gas flaring. This trend however nosedived a bit between 1978 and 1980 and also took off again in the 1980s during the austerity period caused by the glut in the international crude oil market. Since the 1980s till 2005, FDI inflow has been on the rise but emission has been found to be on the decline. This is not unconnected with the country's effort at controlling gas flaring.

Figure 2 confirmed the earlier result from figure 1 which shows that FDI inflows has continued to rise unabated with the exception a little fall in 2006.

From 2006 till date, FDI inflow has been growing steadily. This has positively influenced economic growth which has maintained a fairly stable growth since 1970 up to date and as the case with the FDI, the fall spillover to real GDP which also experienced a fall in 2010 suggesting that a positive relationship exists between FDI and economic growth. However, when deflated with GDP (FDI/GDP), the result suggests otherwise. Also, emission is found to initially grew in the early 1970s but has maintained its fairly declining growth rate between 1980 up to date due to the government's effort at controlling emission. The result also confirmed the existence of the environmental Kuznets curve in Nigeria which states that at the initial level of economic growth, emission increases, gets to a threshold point and decline afterwards due to the employment of better technology of production.

3. Empirical Model and Methodology

Following Omran & Bolbol (2003), we specify growth equation as:

$$PCI = \alpha + b_1 F + b_2 H + b_3 Z + \mu \quad (1)$$

Where PCI is Per-capita Income, *F* is a vector of variables generally recognized to explain growth like human capital (proxy with life expectancy, HC), capital formation (CF) and foreign direct investment (FDI). *H* is a vector of variables that are under study and presumably could affect growth like environmental degradation (proxy with carbon emission from manufacturing industries and construction). *Z* is a vector of controlled variables like inflation rate (INF), trade openness (TO), and interest rate (INT).

Using a Cobb-Douglas production, one can specify:

$$Y = A(FS.ED)L^{\alpha}K^{\beta} \quad (2)$$

Where Y is output, A is total factor productivity, FS is stock of FDI, ED is environmental degradation variables, L is labour, K is capital, α and β are share of labour and capital respectively. Taking the log differential of (2) we have

$$Y = A'(FS.dED + ED.dFS)/A + \alpha L + \beta K \quad (3)$$

Where Y represents the growth rate of output and A' is the derivative of A with respect to the interaction between stock of FDI and ED (i.e. FDI.ED). Keeping in mind that dED=FDI and that $A'Y/A = \lambda$ is the marginal product of total factor productivity due to changes in the interaction term, equation (3) becomes

$$Y = \lambda.FS.dED/Y + \lambda.ED.FDI/Y + \alpha L + \beta K \quad (4)$$

The term ED.FDI/Y in equation (4) captures the interaction between environmental degradation and the FDI ratio. Equation (4) is then transformed from a growth accounting to a growth equation in functional estimable form. To this end, K is proxied with the ratio of investment (CF/GDP), the constant term is $\lambda.FS.dED/Y$, and the growth in output per worker Y/L is replaced with PCI. Therefore, with HC as human capital, ED for environment, and capital investment ratios and foreign direct investment as essentials in the vector *F* which defines growth, equation (4) becomes:

$$PCI = a + b_{11}HC + b_{12}FDI/GDP + b_{13}CF/GDP + b_{14}ED + b_2ED.FDI/GDP + b_3C + \mu \quad (5)$$

All variables are as explained above while μ is the stochastic error term. The study employed carbon emission to capture the environment. Data for the study is extracted from the World Development Indicators (2014) and the Nigerian Bureau of Statistics (2014).

4. Data Analysis

Table 1: ADF Unit Root Test Results

Variable	Intercept	Order of Integration
LGDP	-6.689773*(0) [-2.933158]	1
LHC	-8.650404*(0) [-2.933158]	1
LFDIGDP	-3.338078*(6) [-2.945842]	1
LCFGDP	-6.589675*(0) [-2.933158]	1
LED	-9.514998*(0) [-2.933158]	1
LEDFD	-7.770649*(4) [-2.941145]	1
LTO	-8.298008*(0) [-2.933158]	1
INFR	-7.062198*(1) [-2.935001]	1
INTR	-9.252410*(0) [-2.933158]	1

Note: * significant at 5%; Mackinnon critical values and are shown in parenthesis. The lagged numbers shown in brackets are selected using the minimum Schwarz Information criteria.

Source: Author's Computation, 2015.

The unit root test result above shows that the real GDP, human capital, FDI, capital formation, environment, the interaction variable, trade openness, inflation rate and interest rate are all stationary at first difference. This means that the incorporated variables in the model are stationary at first difference and therefore have no unit-root.

Table 2: Restricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.714015	175.7721	159.5297	0.0048
At most 1	0.632966	123.1958	125.6154	0.0696
At most 2	0.494248	81.09915	95.75366	0.3290
At most 3	0.388513	52.46737	69.81889	0.5287
At most 4	0.287770	31.80918	47.85613	0.6227
At most 5	0.202152	17.55631	29.79707	0.5989
At most 6	0.131560	8.071125	15.49471	0.4578
At most 7	0.049828	2.146718	3.841466	0.1429

Note: * significant at 5%; Mackinnon critical values and are shown in parenthesis. The lagged numbers shown in brackets are selected using the minimum Schwarz Information criteria.

Source: Author's Computation, 2015.

Table 3: Restricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.714015	52.57626	52.36261	0.0475
At most 1	0.632966	42.09663	46.23142	0.1300
At most 2	0.494248	28.63179	40.07757	0.5171
At most 3	0.388513	20.65819	33.87687	0.7096
At most 4	0.287770	14.25287	27.58434	0.8048
At most 5	0.202152	9.485184	21.13162	0.7915
At most 6	0.131560	5.924408	14.26460	0.6229
At most 7	0.049828	2.146718	3.841466	0.1429

In tables 2 and 3, it is clear that the trace statistic as well as the Maximum-eigenvalue suggest that there is long run relationship among the variables. When tested at 5% level of significance, there is 1 co-integrating equation. With the long run relationship confirmed, the long run model is now presented and discussed in table 4.

Table 4: Long Run Estimates

Dependent Variable: Real GDP					
Independent					
Variables	Model 1	Model 2	Model 3	Model 4	Model 5
Constant	6.186	6.370	9.521	9.529	7.112
	(1.76)***	(1.61)	(2.42)**	(2.39)**	(1.62)
LHC	1.588	1.546	0.491	0.490	1.230
	(2.04)**	(1.75)***	(0.53)	(0.52)	(1.11)
FDI/GDP	0.013	-0.000	-0.001	-0.018	-0.060
	(0.45)	(-0.01)	(-0.00)	(-0.13)	(-0.42)
CF/GDP	-2.341	-2.316	-1.774	-1.730	-1.691
	(-4.15)*	(-3.74)*	(-2.86)*	(-2.70)**	(-2.66)**
LED	-0.665	-0.674	-0.761	-0.755	-0.780

Dependent Variable: Real GDP					
Independent					
	(-3.15)*	(-2.94)*	(-3.49)*	(-3.40)*	(-3.53)*
ED.FD/GDP		0.010	-0.010	0.010	0.009
		(0.10)	(0.938)	(2.47)*	(0.36)
LTO			0.313	0.321	0.327
			(2.47)**	(2.47)**	(2.53)**
INFR				-0.01	-0.001
				(-0.001)	(0.36)
INTR					-0.187
					(-1.24)
R^2 (%)	80	80	83	83	84
Prob(F-statistic)	0.000	0.000	0.000	0.000	0.000
D.W.	1.52	1.52	1.53	1.53	1.54

*Significant at 1% level; **Significant at 5% level; ***Significant at 10% level. Figures between parentheses are the 't' statistics.

Table 4 shows the result of the long run estimates of the relationship between economic growth, environmental quality and foreign direct investment employing real GDP, human capital (measured with life expectancy), gross capital formation (investment-income growth), percentage of foreign direct investment to GDP (FDI/GDP), and the natural logarithm of environmental degradation (LED) proxied with carbon emission from manufacturing and construction activities. The interaction between environment and FDI is ED.FD/GDP, while others like trade openness, inflation rate and interest rate are employed as control variables in the model.

From the first model, the result clearly showed that human capital is positive and significant in explaining changes in economic growth. This is in consonance with endogenous growth theory which posits that human capital is a key driver of economic growth. The result is similar across the five models implying that for the Nigerian economy to set any growth target, efforts must be geared towards improving human capital through adequate investment in income earning and health enhancing projects. The FDI ratio is found to be insignificant and negative from model 2 to model 5 in explaining changes in economic growth. It is only in the first model that FDI ratio positively impact economic growth, but on the average across the models, it is negative.

This is similar to Omran & Bolbol (2003) result, thus proving that FDI ratio on its own does not have an exogenous effect on growth. Capital formation (CF), which proxy investment in the study, was found to be significant but negatively impact growth in the study, implying that growth in Nigeria has not been driven by investment efforts as the oil and gas industry contributed a large portion of the country's GDP while the manufacturing sector coupled with low

saving rate has hampered growth efforts of the country. Carbon emission (ED) is negative and significant across the five models and on the average, a 1% increase in emission while holding other variables constant will cause economic growth to fall by almost 70%. This is as expected owing to the fact that carbon emission has a significant negative impact on the environment contributing adversely to the people's health and also causing the government to devote huge resources that should have been earmarked for growth and development to taking care of the sick.

Model 2 adds the interaction term between carbon emission and FDI ratio (ED.FDI/GDP) and it is positive on the average, implying that the interaction between environment and FDI ratio positively enhanced growth in Nigeria. To determine the actual impact of environmental degradation on income, we will derive the threshold level beyond which environmental quality interacted with FDI to affect real GDP positively. We obtained this from the second model by differentiating real GDP with respect to ED and setting the resulting derivative equal to zero:

$$-0.674 + 0.010LED = 0 \quad (6)$$

Solving equation (6), one can calculate LED to be equal to LED = 67.4%. It therefore implies that carbon emission of about 67.4% is the desired threshold level. This is this study's main contribution to knowledge. This implies that suppose Nigeria does not possess foreign direct investment with its consequent degradation of the environment, the country will not be exposed to amount of environmental degradation it currently experiences. In the same vein, the 67.4% is the actual effect of carbon emission on the economy given the inflow of foreign direct investment into the Nigerian economy. Models 3 to 5 include the standard control variables: the natural logarithm of trade openness (LTO), which is the sum of the country's total trade as a ratio of the GDP, inflation rate (INFR) and interest rate (INTR). Trade openness is found to be positive and significant in the study and on the average, a 1% increase in trade openness while keeping other explanatory variables constant boost the GDP by 32%. This is also expected as Nigeria is an import dependent country vis-à-vis its export of crude oil in commercial quantities.

Inflation and interest rates were found to be negative and insignificant in models 4 and 5. This is not unexpected as economic theory posits that inflation will negatively impact economic growth as it erodes purchasing power. Also, a higher domestic interest rate is expected to scare possible investors in physical capital away with its antecedent negative impact on overall investment, aggregate consumption and consequently, economic growth. Both are also

found not to be significant in this study as monetary policy does not play key role in this current research. Also, in models 4 and 5, it was observed that individually, foreign direct investment and environmental degradation negatively impact Nigeria's economic growth but when they are interacted, they positively impact on growth. This implies that emission coming into the country through foreign direct investment is a welcome development. Though environmental degradation alone is not desirable due to its negative impact on growth, but when such emission enters the country through foreign direct investment more growth is recorded.

5. Conclusion

Emerging literature on foreign direct investment stipulates FDI's positive impact on economic growth depends on the prevailing local conditions in an economy as well as its absorptive capacity (Omran & Bolbol, 2003). This study carried out on the Nigerian economy has been able to confirm this assertion, though ignoring the fact that FDI could not on its own positively impact Nigeria's economic growth as it negatively and insignificantly impacts income earning potential of Nigeria over the period of study, but when interacted with the environment, foreign direct investment positively impacts Nigeria's economic growth. Although, while this can be said to be economically desirable, Nigeria must not fail to bear in mind that the threshold emission level of 67.4% must not be exceeded if emission from foreign direct investment is to bring more growth to the economy. It can therefore be safely concluded that environmental quality does not really matter in growth consideration in Nigeria as far as this study is concerned. Though, it may become an issue if the threshold emission level of 67.4% is exceeded.

This empirical result implies that Nigeria should not just concentrate efforts on attracting FDI into its fold as it might not achieve the desired goal of boosting the local economy in any significant positive way. Moreover, the country should look for ways to control its carbon emission below a threshold of 67.4% and also put in place measures that could promote green growth. This will necessarily enhance the welfare of the citizenry, reduce government's expenditure on health, and act as a spur on economic growth. This is in consonance with the saying that "health is wealth". However, if a safe environment is not guaranteed, the country's lax environmental policies may continue to attract pollution emitting resources from different regions of the world above the threshold level thereby consequently making the expected positive gains associated with the interaction between emission and FDI inflow to remain a mirage and the welfare of the populace as suggested in Copeland and Taylor (1994), Cole et al (1997), Cole and Elliot (2005),

Omojolaibi (2010), Saibu (2012) and Isola and Mesagan (2014) will continue to deteriorate drastically. A major lesson learnt in this study is that a developing country that wants to grow has a hard decision to make i.e. it has to decide whether to continue to permit economic growth vis-à-vis increases in the level of emission to a level or it wants to ensure a clean and quality environment while restricting economic growth to a particular level that will not be harmful to the environment. However, striking a balance is what policy makers should work on and this is beyond the scope of this study.

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