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The Impact of National Security on Foreign Direct Investment in Nigeria: An Empirical Analysis

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Abstract
Kidnappings, killings, and corruption seem to be the political cum economic trinity bedeviling Nigeria today. The current state of insecurity and bombings especially in the Northern part of Nigeria has posed serious challenges to the peace and stability of Nigeria macroeconomic environment. The Nation has not only suffered colossal loss in terms of infrastructure, properties and viable human lives but also economic sabotage which leads to the displacement of foreign direct investment. Given the key role which foreign direct investment plays in most developing economies especially as a catalyst for economic growth, it was therefore imperative to examine the relationship between FDI and National security. Thus, this paper investigates the impact of National security on foreign direct investment covering the period of 1980 to 2009 employing Least Squares technique. Defense and Security Vote (DSV) was used as a proxy for National security. The findings reveal a negative nexus between FDI and National security. It was recommended that strong policy stance most be taken to address the state of insecurity in Nigeria (and other developing countries) so as to attract more foreign direct investment essential for economic growth and development.
Keywords: National Security, FDI, and GDP

1 Introduction

Kidnappings, killings, and corruption seem to be the political cum economic trinity bedeviling Nigeria today. The current state of insecurity and bombings especially in the Northern part of Nigeria has posed serious challenges and threat to the peace and stability of Nigeria macroeconomic environment. The Nation has not only suffered colossal loss in terms of infrastructure, properties, and human lives but also economic disruption leading to crowding out effect of foreign investment. The role of foreign direct investment as an engine of economic growth and development in emerging economies cannot be overemphasis. Generally, no business can thrive in tensed and unsecured environment. This has serious implication on foreign direct investment and economic growth. For instance, the Islamic Fundamentalist group "Boko Haram" in the 2011 Independent Day bombing left many casualties in the Nation's capital, in that same year, over 60 people were killed in bomb blast in Yobe State, United Nation building and Police Headquarters were attacked; Kaduna, Jos Plateau and other states in the North are now dreaded places for domestic and foreign investors, tourist and the like of others. Over 7000 Nigerian have reportedly lost their lives in political, religious, and ethnic conflicts cum post election violence between 2000 and 2012.

Domestic terrorism and social unrest do not only breed uncertainty in the investment and financial climate but also increase security cost, reduction in output and productive capacity, reduces tourism, damaged to infrastructure and displacement of foreign direct investment which has severe implication for economic growth and development of emerging economies. This paper attempts to investigate and identify the connection between National security and foreign direct investment in Nigeria; with particular focus on the impact of mounting security concerns on foreign investment.

The body of this paper begins with the examination of basic concept of FDI and National security in section two. The connection between FDI and National security will be discussed in section three. Section four will indicate the model and empirical results. Five comprises conclusion and recommendations.

2 Conceptual Clarification

Concept and Nature of Foreign Direct Investment (FDI)

Foreign direct investment (FDI) means the direct investment of a foreign company or country on the productive asset of the domestic economy. According to Graham and Spaulding (1995), foreign direct investment (FDI) in its classic definition is defined as a company from one country making physical investment into building a factory in another country. Given the rapid growth and changes in global investment patterns, the definition has been broadened to include the acquisition of lasting management interest in a company or enterprise outside the investing firm's home country. As such, it may take many forms, such as direct acquisition of a foreign firm, construction of facilities, or investment in a joint venture or strategic alliance with a local firm with attendance input of technology and licensing of intellectual property.

Odozi (1995) reported that foreign direct investment is a form of lending or finance in the area of equity participation. It generally involves the transfer of resources, including capital, technology, and management and marketing expertise. Such resources usually extend the production capabilities of the recipient country.

Direct investment whether portfolio or not, involves the movement of resources from a surplus region probably to deficit region with a view to making profit. The flow of resources can however be hampered if the political and socio-economic environment of the host country are hostile.

Graham and Spualding (1995), posits that foreign direct investment (FDI) plays an extraordinary and growing role in global business. It can provide a firm with new markets and marketing channels, cheaper production facilities, access to new technology, products, skills and financing. For a host country or the foreign firm which receives the investment, it can provide a source of new technologies and management skills and as such can provide a strong impetus to economic development.

It can be argued that the positive effects of foreign direct investment are the reason for the increase in FDI attractions especially in the emerging economies (Caves, 1996 and Bakare 2010).

In literature, many factors have been identified to determine the flow of FDI in the host country. Chakrabati (2001) and Tarzi (2005) identify market size, market size growth rate, economic competitiveness, trade openness, infrastructure, and worker productivity as critical to the determinant of foreign direct investment.

Regressing FDI on a number of country comparative characteristics to the effect of social relations between the two countries (the host and sending country), Bandelj (2002) argues that political, migration, trade, and cultural relations have strong influence on FDI flows in Central and Eastern Europe.

The most profound effect of FDI has been seen in developing countries, where yearly foreign direct investment flows have increased from an average of less than $10 billion in the 1970's to a yearly average of less than $20 billion in the 1980's, to explode in the 1990s from $26.7billion in 1990 to $179 billion in 1998 and $208 billion in 1999 and now comprise a large portion of global FDI. Driven by mergers and acquisitions and internationalization of production in a range of industries, FDI into developed countries last year rose to $636 billion, from $481 billion in 1998 (Source: UNCTAD).

National Security and Terrorism

In Nigeria presently, security and socio-unrest are profound challenges to the peaceful existence of Nigeria as an entity especially in the North. Innocent citizens are being killed on daily basis; expatriates kidnapped for ransom and in the process even get killed; people now live in fear and anxiety; and tensions are mounting high. The effect of unwholesome killings is the direct reduction in the effective population essential for meaningful development of the economy especially where numbers count. The current wave of suicide bombings in most developing countries especially Nigeria brings to bear the issue of domestic terrorism. We cannot discuss National security without reference to terrorism.

In the main, National security refers to a state where the unity, well-being, values, and beliefs, democratic process, mechanism of governance and welfare of the nation and her people are perpetually improved and secured through military, political and economic resources. In other words, the absence of continuous improvement in the socio-political and economic well-being of the people and states are tagged insecurity. Insecurity is not only limited to communal crisis, ethnic and religious violence, and political conflict but also include the presence of natural disasters such as floods, earthquakes etc.

National security, According to Maier (1990) is best described as a capacity to control those domestic and foreign conditions that the public opinion of a given community believes necessary to enjoy its own self-determination or autonomy, prosperity and wellbeing.

In a holistic perspective, the U.S. Secretary of Defense under the Carter administration from 1977 to 1981, Harold Brown, broaden the definition of National security to include factors such as economic and environmental security.

In the views of Otto and Ukpere (2012), security relates to the presence of peace, safety, happiness, and the protection of human and physical resources or the absence of crisis, threats to human injury among others.

The European approach towards security is laid down in the European Parliament's resolution of 2004: 'the concept of "security" can properly take into account both the influence of issues of political democratic concern (e.g. violation of human rights, willful discrimination against particular groups of citizens, the existence of repressive regimes) and the wide range of social, economic and environmental factors (e.g. poverty, famine, disease, illiteracy, scarcity of natural resources, environmental degradation, inequitable trade relations, etc.) in contributing to existing regional conflicts, the failure of states and the emergence of criminal and terrorist networks, though the actions of the latter may not be seen as being justified in any way, shape or form by the above-mentioned factors'.

What was formerly common in Nigeria was internal conflict; ethnic and religious crisis, political conflict,

resource control agitations and militancy. The current wave of suicide bombings brought in another dimension to the internal crisis. Terrorism is gradually becoming a phenomenon in most developing economies. With this shift from Niger delta militancy to Boko Haram insurgency, Nigeria and other developing countries are void of clear and well coordinated security arrangement and structure to tackle this new development.

Terrorism, whether domestic or transnational has a devastating effects. For instance, the Boko Haram menace in Nigeria has led to the loss of many lives, property worth billions of naira destroyed; severe damaged to infrastructure, loss of investment and income. In fact, terrorism gained serious attention after the aftermath of September 9/11.

Sandler and Enders (2008) view terrorism as a premeditated use or threat of use of violence by individuals or subnational groups to obtain a political or social objective through the intimidation of a large audience, beyond that of the immediate victim. Although the motives of terrorists may differ, their actions follow a standard pattern with terrorist incidents assuming a variety of forms: airplane hijackings, kidnappings, assassinations, threats, bombings, and suicide attacks.

Economic Cost of Insecurity and Terrorism

Insecurity and terrorism has a huge economic, socio and physical cost. It is obvious that the loss of human lives and the suffering of survivors in the aftermath of an attack can be tremendous. Apart from the loss of lives, terrorist attacks are likely to have negative consequences on the investment behavior (Gassebner, 2005). Withdrawer of FDI by countries and companies may occurred due to the direct destruction of infrastructure, the rise of operating costs as a result of high demand for security (Enders and Sandler, 2006; Frey et al, 2007). In the field of stock market, insecurity and terrorism may negatively influence the prices of stock as well as the sales and purchase of stocks. This may increase market volatility due to the perception of investors towards the security of the stock market Jackson et al, (2007). Insecurity may also divert economic resources from highly productive sectors to less productive security measure thereby crowding out investment. No meaningful growth and development can take place in the continuous face of insecurity. This will not only reduce GDP and fuel inflation but also the flow of FDI. McKenna (2005) argues that the increase in government expenditure due to rising insecurity especially in less developed countries may likely result in the sales of foreign reserves and seinorage. As a consequence inflation in those countries will rise.

3 FDI and National Security

Insecurity and terrorism are two inseparable phenomena. Domestic terror and other social vices are perpetrated in the absence of strong security structure. Thus, the two terms can be used interchangeably although they differ in terms of analytical approach. In this paper, the emphasis is on insecurity and domestic terrorism. Domestic terrorism is where the perpetrators, victims, supporters, and targets are all from the home country and the incidents normally occur on home soil. For instance, the kidnapping of a citizen for political purposes or economic reasons, the suicide bombing of a church or government buildings are domestic terrorist incident. The literature on the relationship between FDI and National security are very scanty. While this paper tends to investigate the impact of National security using defense and security vote of government expenditure (annual) as a proxy for National security, it also helps to reduce the gaps in literature. Every year, developing countries spend large portion of their budget on defense and security. For instance, in 2010, over 448 billion naira was voted for security spending in Nigeria. In that same year, the Nigeria Economic Fact Sheet (2011), reported that U.S. which is the largest contributors of FDI in Nigeria dropped by 29% from $8.65 billion in 2009 to $6.1 billion in 2010. The decline in U.S FDI in 2010 was due to ongoing uncertainty related to the proposed Petroleum Industry Bill (PIB) as well as political unrest in the Niger Delta.

The important question is “does the huge fund allocated to defense and security sector actually reflects the social well-being of the Nation?” A critical look at the 2012 budget of Nigeria reveals that security vote received over N900 billion, the highest ever since independence in 1960. Proponents of the budget may attribute this to the insurgence of the Islamic fundamentalist Group and the inability of the security agents to keep pace with the recent trend of events. Opponents are of the views that the despicable state of security structure has remained the same year-in-year-out, with little or no improvement. Chunk of the budget are plaque by corruption and gratification. The answer to the above question however lies in the balance.

Along this line, Enders and Sandler (2008) argued that developing countries are particularly prone to the economic ramifications of terrorism. This will not only lead to loss in GDP but also significant losses in FDI and GDP growth (Abadie and Gardeazabal, 2003). Through disruptions, damage, and insecurity, terrorism is anticipated to reduce FDI (Enders et al., 2006).

Using a terrorism risk index for 2003-2004 in a cross-country analysis, Abadie and Gardeazabal (2008) conclude that a higher risk of terrorism depresses net FDI to a country. High risk and uncertainty are clearly

associated with insecurity and political instability. Such incidents cannot only disrupt infrastructure thereby affecting GDP growth rate but also discourage the flow of FDI.

Bandyopadhyay, Sandler And Younas (2011) investigating the impact of terrorism on FDI/GDP in 78 developing countries for 1984-2008 and applying a system-GMM estimator to a dynamic panel, consisting of eight three-year averages of all variables. They conclude that domestic terrorism has a negative and significant impact on FDI as a share of GDP. This implies that the much needed resources for development can be eroded and displaced given the incessant state of insecurity and terrorism.

4 The Model and Empirical Results

Model and Methodology

This paper uses a multiple equation model to estimate the impact of National security on FDI. Previous empirical works in this area are centered on terrorism and FDI. This paper deviates from previous studies by focusing on the relationship between FDI and National security. The model for this study is specified below:

$FDI = \beta_0 + \beta_1 DSV + \beta_2 GDP + U_t$ ---------- *(1)*

Where; FDI is foreign direct investment, DSV= defense and security vote, GDP = Gross Domestic Product, U_t = error term and β_i's are the unknown parameters. The expectation is that the constant term differs significantly from zero, that the slope coefficients are positive, and that the error term is serially uncorrected.

Gross domestic product (GDP) proxy for economic growth was included in the model to determine the impact on FDI as well as the combined effect of GDP and DSV on FDI because FDI is very critical to developing countries. We use defense and security vote as a proxy for National security because National security cannot be capture in quantitative term. Also, the expenditure pattern of government on the security sector reflects the amount of security in place and the perception of government about the weight of security issues in Nigeria especially if the spending pattern is effective (see Otto and Ukpere, 2012).

The data use for this study is presented in table 1 in appendix. The data show the spending pattern of government on security, the flow of FDI and GDP growth rate in Nigeria from 1980 to 2009.

The study adopted Ordinary least squares (OLS) technique in estimating the structural parameters in the equation. This is because in a linear equation model, Least Squares method will yield unbiased estimate because of its desirable properties of unbiasedness, efficiency and consistency (Iyoha, 2004). Since most time series data move together in time, unit root test was also carried out to test for the existence of unit root and to ultimately render the results meaningful. The Augmented Dickey-Fully test was utilized.

The Empirical Results

The resulting ordinary least squares estimates from the estimation exercise are reported in equation (2) with t-ratios in parentheses below the coefficients.

$$FDI = -60197.14 - .002DSV + 1.15GDP \quad \text{---------- (2)}$$
$$(-2.12) \quad (-.34) \quad (12.23)$$
$$Adj.R^2 = .85; F\text{-}stat. = 84.78; D.W = 2.06$$

As can be seen in equation (2) above, the constant term differs significantly from zero at 95 percent confidence level (although it seems to be somewhat negative), the slope coefficient of DSV reports a negative relationship with FDI and not significantly different from zero at 95 percent confidence level. This implies that the expenditure pattern of government on security during the period under investigation exact negative influence in the inflow of FDI in Nigeria. The fact that the coefficient of DSV being negative may be explained in terms of institutional failing, rent-seeking activities, corruption and inefficient allocation of defense and security vote which compromise the effectiveness of the security system. The effect of this will manifest in terms of increase in crime and uncertainty which reduce economic growth and crowd out foreign investment.

GDP was observed to have positive relationship with FDI and its coefficient estimate is significantly different from zero at 95 percent level. On the combined effect of DSV and GDP on FDI (that is, the degree of explanation brought by the exogenous variables in their entirety), the adjusted R-bar squared shows that over 85 percent systematic changes in FDI are explained by the systematic variations in DSV and GDP. We therefore conclude that the model has a high goodness of fit. More so, the hypothesis of a significant linear relationship between FDI and (DSV and GDP) combined is accepted at 1 percent level of significance. This is based on the high observe F-statistic value of 84.78. Most importantly, the Durbin-Watson (D.W) statistics indicates that the residuals are not serially correlated; as a consequence, the regression parameters are relevant and statistically significant.

To further explore the implication of the result, unit root test was carried out to test if the time series are unit root free. The stationarity of the data has been verified with the ADF (Augmented Dickey-Fully) test, for the case of a linear trend and a constant corresponding to the time span of 1980 to 2009 (results are presented in

appendix). Results of unit root tests show that DSV and GDP variables were unit root free in levels and first difference respectively. FDI became stationary in second difference.

5. Conclusion and Recommendations

This paper investigates the impact of National security on foreign direct investment in Nigeria using Least Squares method. Series are annual and covers the years 1980-2009. ADF test has shown the stationarity of the series of FDI, DSV, and GDP with a probability of 95%. The results from the estimation exercise are quite revealing. It was observed that National security proxy by defense and security vote (annual expenditure on security) crowd out foreign direct investment in Nigeria. Because FDI is an important source of savings for developing countries and, thus, an engine of growth, the interplay between insecurity and FDI is of paramount concern. By way of recommendations, government at all levels and key actors in policy formulation should adopt strong policy measures by devising more holistic approach to tackling the state of insecurity by entrenching the culture of transparency such that funds allocated to the sector (security) are effectively utilize for equipping the security system to meet 21st century standard. Also, government should seek technical assistance in the area of intelligence from advanced countries. Finally, proactive measures should be adopted especially in tackling insecurity brought about by natural occurrences. The most important finding of the study is the negative impact of National security incidents on the inflow of FDI.

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Table 1:

Defense and Security Vote (Public in Millions of Naira), FDI and GDP in Nigeria: 1980 to 2009.

Year	DSV	FDI	GDP
1980	5951300	3620.1	9686.6
1981	9149100	334.7	70395.9
1982	1039370	290	70157
1983	896810	264.3	66389.5
1984	1100060	360.4	63006.4
1985	1430200	434.1	68916.3
1986	1452940	735.8	71075.9
1987	3843080	2452.8	70741.4
1988	5777800	1718.2	77752.5
1989	6270500	13877.4	83495.2
1990	6540200	4686	90342.1
1991	6953.8	6916.1	94614.1
1992	8684.51	14463.1	97431.1
1993	30570.17	29675.2	100015.2
1994	20535.6	22229.2	101330
1995	28757.9	75940.6	103510
1996	46547.3	111295	107020
1997	56184.3	110452.7	110400
1998	50678.8	80750.35	113000
1999	183637.1	92792.47	116000
2000	144530.1	115952.2	138650
2001	180800.9	132481	165400
2002	266509.8	225224.8	298970
2003	307973.3	258388.6	311399.7
2004	306830.6	248224.5	381217.5
2005	434661.1	654193.2	467614.2
2006	458282.7	624520.7	481393.6
2007	564512.4	759380.4	520400.1
2008	731000	460222.6	677752.9
2009	584598.4	572546.8	559848.9

Source: CBN bulletins (various issues)

Table 2: OLS regression result

Dependent Variable: FDI
Method: Least Squares
Date: 10/08/12 Time: 16:47
Sample: 1980 2009
Included observations: 30

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DSV	-0.002292	0.006782	-0.337997	0.7380
GDP	1.149814	0.094054	12.22510	0.0000
C	-60197.14	28448.69	-2.115990	0.0437

R-squared	0.862641	Mean dependent var	154147.4
Adjusted R-squared	0.852466	S.D. dependent var	225822.7
S.E. of regression	86738.94	Akaike info criterion	25.67383
Sum squared resid	2.03E+11	Schwarz criterion	25.81395
Log likelihood	-382.1075	F-statistic	84.78226
Durbin-Watson stat	2.061192	Prob(F-statistic)	0.000000

Sources: EViews 3.1 output, 2012.

Table 3: Augmented Dickey- Fuller Unit Root Test on D(FDI,2)

ADF Test Statistic	-4.253271	1% Critical Value*	-4.3552
		5% Critical Value	-3.5943
		10% Critical Value	-3.2321

*MacKinnon critical values for rejection of hypothesis of a unit root.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(FDI,3)
Method: Least Squares
Date: 10/08/12 Time: 17:29
Sample(adjusted): 1984 2009
Included observations: 26 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(FDI(-1),2)	-1.848132	0.434520	-4.253271	0.0003
D(FDI(-1),3)	-0.030324	0.256027	-0.118442	0.9068
C	28345.23	55812.02	0.507870	0.6166
@TREND(1980)	-2078.259	3101.344	-0.670115	0.5098

R-squared	0.875756	Mean dependent var	15825.50
Adjusted R-squared	0.858814	S.D. dependent var	310640.4
S.E. of regression	116722.3	Akaike info criterion	26.31362
Sum squared resid	3.00E+11	Schwarz criterion	26.50717
Log likelihood	-338.0771	F-statistic	51.69048
Durbin-Watson stat	1.972949	Prob(F-statistic)	0.000000

Sources: EViews 3.1 output, 2012.

Table 4: Augmented Dickey- Fuller Unit Root Test on D (DVS)

ADF Test Statistic	-4.081586	1% Critical Value*	-3.6852
		5% Critical Value	-2.9705
		10% Critical Value	-2.6242

*MacKinnon critical values for rejection of hypothesis of a unit root.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(DSV)
Method: Least Squares
Date: 10/08/12 Time: 17:38
Sample(adjusted): 1982 2009
Included observations: 28 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DSV(-1)	-0.568684	0.139329	-4.081586	0.0004
D(DSV(-1))	0.068272	0.156819	0.435353	0.6670
C	546225.5	379090.9	1.440883	0.1620

R-squared	0.420126	Mean dependent var	-305875.1
Adjusted R-squared	0.373737	S.D. dependent var	2071696.
S.E. of regression	1639474.	Akaike info criterion	31.55861
Sum squared resid	6.72E+13	Schwarz criterion	31.70134
Log likelihood	-438.8205	F-statistic	9.056422
Durbin-Watson stat	1.171580	Prob(F-statistic)	0.001101

Sources: EViews 3.1 output, 2012.

Table 5: Augmented Dickey- Fuller Unit Root Test on D(GDP)

ADF Test Statistic	-4.272694	1% Critical Value*	-4.3382
		5% Critical Value	-3.5867
		10% Critical Value	-3.2279

*MacKinnon critical values for rejection of hypothesis of a unit root.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(GDP,2)
Method: Least Squares
Date: 11/20/12 Time: 10:08
Sample(adjusted): 1983 2009
Included observations: 27 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(GDP(-1))	-1.692782	0.396186	-4.272694	0.0003
D(GDP(-1),2)	-0.015506	0.291686	-0.053160	0.9581
C	-34204.75	20881.94	-1.638006	0.1150
@TREND(1980)	4248.808	1479.645	2.871504	0.0086

R-squared	0.653933	Mean dependent var	-4357.967
Adjusted R-squared	0.608794	S.D. dependent var	69452.66
S.E. of regression	43440.18	Akaike info criterion	24.33211
Sum squared resid	4.34E+10	Schwarz criterion	24.52409
Log likelihood	-324.4835	F-statistic	14.48705
Durbin-Watson stat	1.843900	Prob(F-statistic)	0.000016

Source: EViews 3.1 output, 2012.