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The Effect of Insurance on Foreign Direct Investments Inflow to Nigeria

Chimaobi V. Okolo, Afamefuna J. Ani, Ebere U. Okolo

***Abstract*—**This paper seeks to assess the implications of insurance to foreign direct investment inflow in Nigeria. Multiple linear regression technique and correlation matrix test were employed to measure the extent to which foreign direct investment was influenced. The result showed that insurance premium (IP), asset size of insurance industry (AS), and total investment of the industry (TI) impacted significantly and positively on foreign direct investment inflow in Nigeria. There should be effective risk transfer mechanism and financial intermediation, which gives the investor confidence in the risk management strength of the host country.

***Keywords*—**Foreign direct investment, insurance.

I. Introduction

FOREIGN DIRECT INVESTMENT (FDI) is an investment made to acquire a lasting management interest (normally 10% of voting stock) in a business enterprise operating in a country other than that of the investor defined according to residency [1]. Such investments may take the form of either Greenfield" investment (also called "mortar and brick" investment) or merger and acquisition (M&A), which entails the acquisition of existing interest rather than new investment [2]. According to the paper, ownership of at least 10% of the ordinary shares or voting stock is the criterion for the existence of a direct investment relationship. The paper continued that FDI comprises not only merger and acquisition and new investment, but also reinvested earnings and loans and similar capital transfer between parent companies and their affiliates. As stated "countries could be both host to FDI projects in their own country and a participant in investment projects in other countries".

Reference [2] argued that a country's inward FDI position is made up of the hosted FDI projects, while outward FDI comprises those investment projects owned abroad. He asserts that one of the most salient features of today's globalization drive is conscious encouragement of cross-border investments, especially by transnational corporations and firms (TNCs). The paper reported that many countries and continents (especially developing) now see attracting FDI as an important element in their strategy for economic development, stating that FDI is seen as an amalgamation of capital, technology, marketing and management.

Nigeria as a country, given its natural resource base and large market size, qualifies to be a major recipient of FDI in Africa and indeed is one of the top three leading African countries that consistently received FDI in the past decade. However, the level of FDI attracted by Nigeria is mediocre compared with the resource base and potential need [3]. Reference [4] further stated that most investors across the world want to go to countries and economies where there is adequate insurance for life and property, especially now that issues of terrorism and kidnapping have grown in larger scale across the globe.

Risk management in emerging economics like Nigeria has relied on a reactive approach to risk financing which has become increasingly unsustainable due to a number of factors [5] and investors consider the sector weak and not able to cover large credit risk. He observed that many big businesses in Nigeria that would have contributed positively to the economy wellbeing of Nigeria are struggling to survive or no longer in operation due to lack of sound risk management in place. In the same vein, [6] complained that the level of insurance awareness in Nigeria, a factor that influences the degree of patronage, remains one of the lowest in the world. Buttressing his point with records sourced from the industry, Nigeria, with a population of over 140 million people has an insurance density of about 5-10%, as against 40-50% in some developing countries, and 90-98% in most developed countries.

According to statistics recently released by the Central Bank of Nigeria (CBN) Foreign Direct Investment (FDI) inflows dropped by 19.24 percent from $2.13 billion in the fourth quarter (Q4), 2011 to $1.72 billion in Q1, 2012. The decline in FDI inflows during the review period, CBN noted, were caused by growing level of insecurity occasioned by terrorist activities.

While Nigeria poses a high return on investment and is on the search light of foreign investors, there are also risks that face these investors in the country, it is pertinent to expose the relevance of the insurance sector in absorbing the risk that could accrue to these investments coming into the country. Therefore, the paper seeks to assess the implication of insurance to foreign direct investment in Nigeria. The rest of the paper is organized into four sections. Section two is devoted to the review of the related literature. Section three presents the methodological framework while the discussion of results is in section four. The conclusion and recommendations are presented in section five.

C. V. Okolo is with department of Economics, Enugu State University of Science and Technology, Enugu, Enugu State, Nigeria (+234-803-778-6912; e-mail: iparconsult@gmail.com).

A. J. Ani is with the department of Insurance, Institute of Management and Technology, Enugu, Enugu State, Nigeria (e-mail: afaminsurance@yahoo.com).

E. U. Okolo is with the Department of accountancy, Enugu State University of Science and Technology, Enugu, Enugu State, Nigeria.

II. Literature Review

Risk management in emerging economics like Nigeria has relied on a reactive approach to risk financing which has become increasingly unsustainable due to a number of factors [5]. They noted that the recent developments in global financial markets have raised serious questions about the management and oversight of the financial services industries, at both the micro level for individual entities and at the macro level for the system as a whole. Economies grow and in turn accumulate more assets and become more vulnerable. Subsequently, exposure to hazard increase which point to a continuing trend of increasing losses due to natural disasters.

Reference [5] observed that many big businesses in Nigeria that would have contributed positively to the economy wellbeing of Nigeria are struggling to survive or no longer in operation due to lack of sound risk management in place. They state the effect of this as abandonment of capital projects such as building, bridges and road constructions at cooperate and various level of government in the country. They explained that the simple reason is that most contractors or the decision making body of the organizations involved do not embark on appropriate risk management techniques or models. In their words, “there are insurance policies to handle these challenges but it is rather unfortunate, they are not been patronized. One of the reasons for these is due to low awareness programmes on availability of insurance products to hedge against these fortuitous circumstances”.

Reference [6] complained that while insurance companies are known to play dominant roles in developed economies, the sector in Nigeria is the exact opposite – the insurance industry in Nigeria contributes less than One percent to the nation’s GDP. The research showed that the level of insurance awareness in Nigeria, a factor that influences the degree of patronage, remains one of the lowest in the world. Buttressing his point with records sourced from the industry, he showed that Nigeria, with a population of over 140 million people has an insurance density of about 5-10%, as against 40-50% in some developing countries, and 90-98% in most developed countries. He however stated that today, all indices point to the fact that Nigeria’s insurance industry is on the precipice of a new dawn. The insurance horizon in Nigeria now features a genre of insurance operators that are determined to deploy multiple competencies, best practices, periodic recapitalization, sound corporate governance, adequate reinsurance treaties, and viable investment management strategies to drive service delivery in the industry. Furthermore, he stated that the performance of insurance stocks in the capital market in recent times shows that a new chapter has just begun for the sector: the penny stocks of yesterday are now creating wealth and empowering more Nigerians.

Reference [7] listed functions that could be expressed as resources accumulation, resource allocation, managing various risks and facilitation of exchange, arguing that it is by realizing these functions that the insurance sector contributes to economic growth. They observed that the channels to growth model tries to link the financial intermediation function of insurance companies to economic growth. In their words, “the growth theory states that well developed financial intermediation can promote economic growth through marginal productivity of capital, efficiency of channeling savings to investment, savings rate and technological innovations”.

The Nigerian insurance sector is largely focused on corporate businesses, especially the oil and gas industry. The retail insurance market is limited with a key barrier to the expansion of this market, being a lack of trust. A number of insurance policies are also mandatory. Since 1987, the government has made 16 products mandatory, including third party motor, health care indemnity, group life, builders’ liability and occupiers’ liability. Yet enforcement of compulsory insurance is a big challenge [8].

Reference [9] showed that despite the long history of insurance industry in Nigeria, the sector’s operational efficiency has remained sub-optimal. They attributed it to factors such as unfavourable macroeconomic environment, poor regulatory framework, market suspicion of insurance companies among others.

A Insurance Industry Challenges in Nigeria

Insurance industry is generally seen as the backbone of any country’s risk management system, since it ensures financial security, serves as an important component in the financial intermediation chain, and offers a ready source of long term capital for infrastructural projects [9].

Babalola [9] explains that insurance industry mitigates the impacts of risks and positively correlates to growth as entrepreneurs cover their exposures, otherwise risk-taking abilities are hampered”. Insurance also promotes the growth of small and large firms as it provides stability by allowing large and small businesses operate with a lesser risk of volatility or failure [9].

Reference [10] accords great importance to insurance in the financial system. The research argued that in collecting relatively small premium from the insured in the economy, insurers are able to pull together a large pool of funds that could be invested for short and long term periods. Such long-term funding of the economy is very critical for economic growth, and the deepening and broadening of the domestic financial system. Thus, [9] believes that strong and competitive insurance industry would compel Nigeria’s economic development and growth. They observed that insurance industries globally are experiencing a daunting task of sustained profitability in the face of capital constraints and volatile assets value. They argued that in Nigeria, there are wide ranges of challenges facing the insurance industry. They explained the major challenges as unfavorable macroeconomic environment, market suspicion of insurance companies, poor regulatory framework, and poor attitude towards insurance services [10].

The ability of the insurance sector and the government to absorb and reduce the risk facing foreign investors will determine the level of flow of foreign direct investment in Nigeria. This study is very important because empirical studies that consider risk management as a boost to foreign direct investment in Nigeria are quite rare.

III. Methodology

The study employed econometric analysis. In line with [11]-[14], [2], this work employed secondary data and OLS technique for analysis. This was specified to help examine the influence of insurance on foreign direct investment in Nigeria; the need to test the theory in order to supply numerical estimate of the coefficients of insurance premium, insurance industry investment, insurance asset size, trade openness, and exchange rate in relationship to foreign direct investment. Trade openness is proxied by import-export ratio (IMEX). This will be backed up with relevant time series data, which will span a period from 1996-2010, fifteen years. Furthermore, a correlation matrix test was done to show the strength or weakness of the relationship between variables. We hypothesize that;

1. Insurance premium has no significant and positive effect on foreign direct investment inflow into Nigeria.
2. Insurance industry investment does not have significant and positive effect on foreign direct investment inflow into Nigeria.
3. The asset size of insurance industry does not have significant and positive effect on foreign direct investment inflow into Nigeria.

This can be estimated using the model:

$$FDI = B0 + B1IP + B2IMEX + B3Ex + \varepsilon \quad (1)$$

$$FDI = B0 + B1TI + B2IMEX + B3Ex + \varepsilon \quad (2)$$

$$FDI = B0 + B1AS + B2IMEX + B3Ex + \varepsilon \quad (3)$$

where; IP = Insurance Premium; AS = Asset Size of insurance companies; TI = Total Investment of insurance companies; IMEX = Import, Export ratio (trade openness); Ex = Exchange rate; FDI = Foreign Direct Investment; Ɛ = error term; B0, B1, B2… = denote unknown parameters to be estimated.

IV. Discussion

A Empirical Results

1. Foreign Direct Investment and Insurance Premium

The test carried out at 5% level of significance shows that insurance premium positively and significantly affected foreign direct investment inflow into Nigeria. The effect of trade openness and exchange rate was insignificant in the period. Exchange rate had a negative impact on foreign direct investment. However, for every increase in foreign direct investment, exchange rate decreased twice (i.e. -2.015580). Trade openness contributed 20.6% to the increase in foreign direct investment inflow in Nigeria.

The empirical results show that Adjusted R2 is approximately 93% (0.929018) which implies that variation in the foreign direct investment are attributable to variations in the dependent variables. Therefore, it is a good fit.

TABLE I
REGRESSION RESULT OF FOREIGN DIRECT INVESTMENT, INSURANCE PREMIUM, TRADE OPENNESS AND EXCHANGE RATE

Dependent Variable: LNFDI
Method: Least Squares
Sample: 1996 2010
Included observations: 15

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	13.04186	3.314582	3.934691	0.0023
LNIP	1.279308	0.441789	2.895741	0.0146
LNIMEX	0.206049	0.519379	0.396723	0.6992
LNEX	-2.015580	1.026229	-1.964064	0.0753
R-squared	0.944228	Mean dependent var		26.40946
Adjusted R-squared	0.929018	S.D. dependent var		0.952497
S.E. of regression	0.253769	Akaike info criterion		0.318390
Sum squared resid	0.708383	Schwarz criterion		0.507203
Log likelihood	1.612076	F-statistic		62.07764
Durbin-Watson stat	1.578161	Prob(F-statistic)		0.000000

Author's computation with E-views software

B. Foreign Direct Investment and Asset Size of Insurance Industry

TABLE II
REGRESSION RESULT OF FOREIGN DIRECT INVESTMENT, ASSET SIZE OF INSURANCE COMPANIES, TRADE OPENNESS AND EXCHANGE RATE

Dependent Variable: LNFDI
Method: Least Squares
Sample: 1996 2010
Included observations: 15

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	18.15726	2.602598	6.976591	0.0000
LNAS	0.629723	0.286786	2.195795	0.0505
LNIMEX	0.518295	0.536572	0.965938	0.3548
LNEX	-0.094426	0.664827	-0.142031	0.8896
R-squared	0.931666	Mean dependent var		26.40946
Adjusted R-squared	0.913029	S.D. dependent var		0.952497
S.E. of regression	0.280899	Akaike info criterion		0.521535
Sum squared resid	0.867947	Schwarz criterion		0.710349
Log likelihood	0.088486	F-statistic		49.99118
Durbin-Watson stat	1.668772	Prob(F-statistic)		0.000001

Author's computation with E-views software

Evident from the test carried out at 5% level of significance, results shows that the asset size of insurance industry contributed to positively to foreign direct investment inflow into Nigeria and its effect was also significant. A quick look at the probability result of the regression showed the log of asset size of insurance industry to be 0.0505, which is in significance at par with 0.5 (5% significance level). The effect of trade openness and exchange rate was insignificant in the period with respect to foreign direct investment inflow into Nigeria. Exchange rate also had a negative impact on foreign direct investment inflow. However, for every increase in foreign direct investment, exchange rate decreased by -0.094426. Trade openness contributed 51.8% to the increase in foreign direct investment inflow into Nigeria.

The empirical results show that Adjusted R2 is approximately 91.3% (0.913029) which implies that variation in the foreign direct investment are attributable to variations in the dependent variables. Therefore, it is a good fit.

C. Foreign Direct Investment and Total Investment of Nigerian Insurance Industry

TABLE III
REGRESSION RESULT OF FOREIGN DIRECT INVESTMENT, TOTAL INVESTMENT OF INSURANCE COMPANIES, TRADE OPENNESS AND EXCHANGE RATE

Dependent Variable: LNFDI
Method: Least Squares
Sample: 1996 2010
Included observations: 15

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	17.81245	2.552874	6.977413	0.0000
LNTI	0.351490	0.145181	2.421049	0.0339
LNIMEX	0.686067	0.434411	1.579305	0.1426
LNEX	0.646890	0.592770	1.091299	0.2985

R-squared	0.935880	Mean dependent var	26.40946
Adjusted R-squared	0.918393	S.D. dependent var	0.952497
S.E. of regression	0.272099	Akaike info criterion	0.457874
Sum squared resid	0.814414	Schwarz criterion	0.646688
Log likelihood	0.565942	F-statistic	53.51816
Durbin-Watson stat	1.179137	Prob(F-statistic)	0.000001

Author's computation with E-views software

A third test carried out at 5% level of significance, shows that the total investment of insurance industry contributed to significantly and positively to foreign direct investment inflow into Nigeria and its effect was also significant. An observed t-statistics (t*) of 2.421049 and a corresponding probability of 0.0339 (less than 5%) confirms the above statement. The effect of trade openness and exchange rate remained insignificant as in the test of insurance premium and insurance industry asset size effect on foreign direct investment inflow into Nigeria for the period of study. Though their effect was insignificant, trade openness and exchange rate contributed 68.6% and 64.7% to the increase in foreign direct investment inflow in Nigeria. The results further showed that Adjusted R2 is approximately 91.8% (0.918393) which implies that variation in foreign direct investment is attributable to variations in the dependent variables. Therefore, it is a good fit.

TABLE IV
CORRELATION MATRIX TEST

	LNTI	LNEX	LNFDI	LNIMEX	LNIP	LNAS
LNTI	1	0.7279395968	0.9439214010	0.9255975701	0.9221511160	0.9588316897
LNEX	0.7279395968	1	0.8065728526	0.8119091879	0.9238195490	0.8452562895
LNFDI	0.9439214010	0.8065728526	1	0.9474285846	0.9523049122	0.9621399156
LNIMEX	0.9255975701	0.8119091879	0.9474285846	1	0.9520232454	0.9634576339
LNIP	0.9221511160	0.9238195490	0.9523049122	0.9520232454	1	0.9811274284
LNAS	0.9588316897	0.8452562895	0.9621399156	0.9634576339	0.9811274284	1

Author's computation with E-views software

The correlation matrix test was conducted to show the strength and weakness of the relationship between variables. This test was done with controlled variables (i.e. log of variables) and the result showed that all variables had strong and positive relationship with each other. The relationship ranged from 72.8%, which is between log of exchange rate and log of insurance industry total investments to 98.15, which signified the relationship between log of insurance premium and log of asset size of insurance industry.

D. Test of Hypotheses

1. Hypothesis I

The first hypothesis states that insurance premium did not have significant effect on foreign direct investment inflow into Nigeria. The result of the first regression analysis showed the observed t- statistics (t*) and probability (p) to be 2.895741 and 0.0146 (which is less than 0.05). Following the result of the test, we reject the null hypothesis and conclude that insurance premium significantly and positively affected foreign direct investment inflow into Nigeria.

2. Hypothesis II

The second hypothesis states that the insurance industry investment did not significantly and positively affect foreign direct investment inflow into Nigeria. The result of the first regression analysis showed the observed t- statistics (t*) and probability (p) to be 2.195795 and 0.0505 (which is at par with 0.05). Therefore, we conclude that insurance industry investment significantly and positively affected foreign direct investment inflow into Nigeria.

3. Hypothesis III

Furthermore, the last hypothesis states that the asset size of insurance industry did not significantly and positively affect foreign direct investment inflow into Nigeria. The result of the relevant regression analysis showed the observed t- statistics (t*) and probability (p) to be 2.421049 and 0.0339 (which is at par with 0.05). We conclude that the asset size of insurance industry significantly and positively affected foreign direct investment inflow into Nigeria.

V. CONCLUSION AND RECOMMENDATIONS

Most economic rationale for granting special incentives for attracting foreign direct investment is based on the belief that it bridges the 'idea gaps' between rich and the poor nations in addition to the generation of technological transfers and spillovers [15]. Nigeria is one of the economies with great demand for goods and services and has attracted foreign direct investment over the years. She also has high return on investment as well as high risk. While foreign direct investment inflow into Nigeria bridges its savings investment gap and contributes to growth of the economy, it is important to insure these investments against risk that might accrue to it. Repositioning the insurance industry for greater effectiveness is a way of sustaining foreign direct inflow and ensuring sustained growth of the Nigerian economy. This will attract greater foreign direct investment inflow and encourage more people to buy insurance, thereby increasing premium income and provide investible funds which can be directed into lucrative investments for increased capital formation and productivity. It is therefore recommended that Nigerian authorities consider the future effect of present policies geared toward increasing foreign direct investment inflow in Nigeria. Furthermore, there should be effective risk transfer mechanism and financial intermediation, which gives the insured confidence in the risk management strength of the host country as they focus their attention on businesses that can lead to real investment and economic growth. Finally, government should make policies that protect both the insurers and the insured in the country as this would encourage people to patronize insurance companies and encourage the companies to always pay genuine claims promptly.

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Chimaobi V. Okolo (B.Sc. [econ], B.Sc. [acc], M.Sc., ACE, Ph.D [in view]) holds a Bachelor of Science degrees in economics and accounting, from Enugu State University of Science and Technology and University of Nigeria respectively, both in Enugu State of Nigeria. The author had his Master of Science degree in economics with specialization in monetary economics and quantitative methods in economics, from Nnamdi Azikiwe University, Awka, Anambra State of Nigeria.

He has been a member of the Institute of Chartered Economist of Nigeria (ICEN) since 2008 and briefly an editorial board member of the International Journal of Innovative Research in Management (IJIRM). He is a lecturer in the department of economics, Enugu State University of Science and Technology and is currently studying for his doctorate degree in economics.

Ebere U. Okolo (B.Sc., B.Ed., MBA, M.Sc./Ph.D. [in view]) had her Bachelor of Science and Bachelor of Education degrees in accounting and computer science education respectively from Enugu State University of Science and Technology in Enugu State of Nigeria. The author had her Master of Business Administration from Enugu State University of Science and Technology. Ebere U. Okolo has been a lecturer for 16 years in the department of Business Education (accounting option) and department of accounting in the Institute of Ecumenical Education and Enugu State University of Science and Technology respectively. The author is currently studying for her Doctorate degree in accountancy.

Afamefuna J. Ani (B.Sc., MBA, M.Sc. [in view]) has been a lecturer in the department of insurance at the Institute of Management and Technology, Enugu State, of Nigeria for over 10 years. The author studied insurance at the Bachelor of Science degree level from Enugu State University of Science and Technology and obtained his MBA from the same university. Afamefuna J. Ani is currently studying for a Master of Science degree in Insurance from Enugu State University of Science and Technology.