

Impact of Non-life Insurance Penetration on the Economic Growth of Nigeria

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Abstract

This study explores the impact of non-life insurance industry performance on economic growth in Nigeria. Insurance penetration is measured through five diverse proxies such as non-life insurance, savings, expenditures, investment and profits of the insurance industry with their time-series statistics covering the period 1988 and 2012. The ex-post facto research strategy and purposive (judgemental) sampling technique were discovered appropriate for the study as effectively utilised by several intellectuals in the past. Data were analysed using regression. The ordinary least square regression was adopted for the testing of the hypotheses. The outcomes of the study showed that non-life insurance penetration had a substantially positive effect on the economic growth in Nigeria during the period. Profit and investment are found to have a positive effect on the economy but statistically insignificant while Savings and government expenditure have an adverse effect on the economy. The study recommends an improved modification in insurance products, especially in non-life businesses to availing clients the chance of choosing from a diversity of products. The study, therefore, recommends an increase in the awareness of non-life insurance services for its impact to be felt at all levels and to encourage participation.

Keywords: Non-life insurance, Economic growth, Insurance penetration, Nigeria

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1. Introduction

In recent times, the insurance activity had shown an implausible increase which had an expressively valuable effect on the economic growth of several countries globally (Outreville, 2011; 2013). According to Avram, Nguyen and Skully (2010) and SwissRe (2015), total global insurance premiums have increased from \$467 billion to \$3,426 billion and \$3,732 billion in 1980, 2005 and 2006 respectively which amounts to approximately, 58% and 42% life and non-life insurance.

In addition, the capacity of insurance premium in the year 2009 rose to \$4.06 trillion, which is equal to 7% of global GDP. Subsequently, it increased to \$4.3 trillion and \$4.57 trillion in 2010 and 2011 (SwissRe, 2015) and \$4.61 and \$4.64 trillion in the year 2012 and 2013 respectively (Iyodo, Samuel and Inyada, 2018).

In Nigeria, the role of insurance companies cannot be under-estimated. It provides robust financial services that boost growth and progress in the country (Olulekan and Akinlo, 2013; Adeniyi, Adeyinka and Iyodo, 2019). Its services that influence growth in the country include the deployment of a colossal sum of funds by means of premiums for short- and long-term investment for development and underwriting of risk in economic entities. It also encourages financial reliability and confidence in the financial market and offers a sense of harmony to economic entities which in the long run, give rise to profit and value for the various shareholders involved (Ahmed, Ahmed and Ahmed, 2010; Avram, Nguyen and Skully, 2010; Charumathi, 2012).

Despite this achievement in the insurance sector, academic literature mostly, do not draw attention to these achievements instead more emphasis was laid on the other constituent of the sector, the financial sector which comprises of bank and the stock market. The insurance business has long been acknowledged as the risk-controlled service supplier in the financial sector. Undeniably the insurance company procedures are indispensable for the advancement of the banking sector, exclusively in secured (protected) lending. Also, Insurance nurtures trade across nations and subsequently produces bank proceeds.

Similarly, the involvement of insurance businesses in long-term premium flows encourages the improvement in home bond and stock exchanges markets (Philip, 2012; Din, Angappan and Baker, 2017). Chui and Kwot (2008), observe that banking and insurance activities are inseparable in many countries (Lim 2014). All these events impact promoting economic progress, and so provide the rationale for this study, the impact of non-life insurance penetration on the economic growth of Nigeria

Basically, insurance companies offer various sorts of products, however, it was largely agreed to categorize those services into two main groups: the life and the non-life insurance. The life insurance is the promise to compensate the beneficiary of the insured with certain sum of money upon his/her death, while the non-life insurance is not related to life but to property such as theft, motor vehicle insurance, marine insurance, property liability insurance, among others (Ajayi, 2002; Adaramola, 2002). The two groups of insurance products have diverse portions in risk management and indemnification, this study explores the impact of nonlife insurance

infiltration on the economic growth of Nigeria

Due to the neglect of the insurance industry in Nigeria, carrying out business in Nigeria today is very risky considering the rate of insecurity in the country. Because of the uncertainty experienced in the country, the level of growth and economic advancement that should correspond with the country's enormous potential has not been achieved yet even in other developing countries.

One of the indices for measuring the progress of any economy is the size and maturity of its insurance industry. Insurance industry acts as the absorber of the risk and uncertainty associated with economic activities, and its absence can significantly reduce the growth of economic activity (Cristea, Marcu and Carstina, 2014). Most Nigerians especially the rural dwellers are ignorant of significant of the insurance industry. The part played by the insurance sector in easing sudden and ruinous occurrences thereby invigorating economic growth cannot be overemphasised (Guochen, 2012; Lee *et al.*, 2016). Among its benefits, one of which is that it allows the insured to stabilise their income every time a negating event happens, or on the state in which such an incident does not take place, and this is done through the fee of premium and the receiving of compensation (Indemnity), in the case of misfortune (Seyed, *et al.*, 2010; Olulekan, and Akinlo, 2013).

Despite the numerous achievement of the insurance sector as highlighted by Ahmed, Ahmed and Ahmed (2010); Avram, Nguyen and Skully (2010); Charumathi (2012), Iyodo, Samuel and Inyada, (2018), Adeniyi, Adeyinka and Iyodo (2019), and the neglect by the Nigeria government in utilizing the full potential of the sector, the question now is 'to what extent has non- life insurance infiltration exert a positive and substantial influence on economic growth of Nigeria?' The following hypothesis was formulated to answer the above question: Non- life insurance penetration does not have a positive and significant impact on economic growth in Nigeria.

For proper analysis, a period of 27 years (1988-2014) was reviewed to address the above examinable hypothesis. This research covers the best performing and quoted insurance companies both with the National Insurance Commission (NAICOM) and the Nigeria Stock Exchange (NSE). This study is significant because it provides information on the relationships between the insurance activity and the Nigerian economic growth, the performance and efficiency of the insurance industry which would be of great benefit to policymakers, insurers, economic watchers and the public, researchers and students.

2. Review of Related Literature

Although the insurance industry is an essential ingredient in the smooth working of the business entity and the entire Nigerian economy, it has not attracted much attention of many scholars.

Life is full of one form of risk or the other. One may choose not to be engaged in any business activity to avoid risk or loss, but as we all know, it is even riskier to do nothing. Virtually, every field of human endeavour is confronted with risk, in every decision taken either by individual or business organisation, one cannot but perceive the omnipresent nature of uncertainty particularly in the Nigerian business environment. This notwithstanding, one cannot avoid deciding from time to time since this is inseparable from life.

Osoka, (1999) and Beck and Webb (2003), maintain that the insurance business is necessary to the good and smooth running of a modern economy. According to Osipita (2009), the insurance business is vital to the financial market due to its role in helping businesses to manage their resources and alleviate risk efficiently. The supports also include helping small and medium scale entrepreneurs in taking inventive and higher-return projects (CEA, 2007). Arena (2008), emphasizes that there are possible to be diverse aspects of economic growth from the insurance products given that these products protect the firms, households, and individuals, from unlike kind of menaces that would affect the economic endeavour in different means.

Mittai and Gupta (2008), viewed insurance as a device of cooperation for spreading the loss caused by a risk over some individuals who are vulnerable to it and who agree to insure themselves against that risk. Insurance could be defined as an arrangement whereby one party promises to indemnify or pay another party a sum of money in the event of his suffering a specified loss or damage. It could also be defined as a system that makes available financial reimbursement for the effect of loss; the payment is created from the accrued contributions of all persons contributing to the fund or scheme (Anyaele, 2003; Zouhaier, 2014).

Economic growth is the process by which the productive dimensions of an economy rise over time, leading to an upsurge in its national income. When there is economic growth, its illustrated in the form of an income level, a rise in the overall capital stock, expansion of the labour force and in a higher volume of trade and consumption of the country.

2.1 Insurance and Economic growth

Several scholarships on insurances and economic growth have found the necessary evidence to recommend that the expansion of the insurance business is associated with economic growth (Webb, 2000; Ward and Zubruegg, 2000; Ebitu, Ibok and Mbum (2012); Iyodo, Samuel and Inyada, 2018). Insurance has gained growing importance through the quest for individuals and groups to control their income and life risks. In the view of Ujunwa and Modebe (2011), the insurance industry is perceived as the pillar of any country's risk management system since it

guarantees financial haven and helps as an essential factor in the financial intermediation chain offering an organized spring of enduring capital for infrastructural developments.

One of the pioneering works on the relationship between insurance and economic growth is the work of Beenstock, Dickinson and Khajurja (1988), using time series data from 1970 to 1981 of ten advanced countries, which found that insurance has a positive influence on economic growth. In addition, Ward and Zurbruegg (2000), Hussels, Ward and Zurbruegg (2005) and Arena (2008) investigated how insurance (both life and non-life) promotes growth in an economy. The outcome of the studies further confirms a positive impact between the two variables. Arena (2008) investigation was based on looking at the relationship between 56 established and emerging countries using data from 1976 to 2008 whereas the Ward and Zurbruegg (2000) were based on OECD nations.

In addition to Ward and Zurbruegg (2000), Browne, Chung and Frees (2000), used a pooled cross-sectional panel model approach to examine the link between a general liability insurance and motor vehicle insurance in the OECD nations over the 1986-1996 period. They regressed liability insurance consumption on a diversity of factors, as well as the legal system, wealth and income. Browne, Chung and Frees (2000) argued that income influence insurance consumption. Relationship with risk aversion was statistically unimportant for motor vehicle insurance consumption and adversely related general liability insurance consumption. Also, Chang *et al.* (2014) examined the association between insurance and economic growth for 10 OECD nations. The bootstrap Granger causality model was used in the study and the revealed that one-way Granger causality shows that insurance business influence economic growth in countries France, United Kingdom, Japan, Switzerland, and the Netherlands (Kyosevski, 2011; Iyodo, Samuel and Inyada, 2018).

In addition, using a cross country dataset from 1980 to 1996 for 55 countries, Web, Grace and Skipper (2002) unearthed a positive association between economic growth and insurance. Similarly, Haiss and Sumegi (2008) examined the theoretical and empirical characteristics of the relationship between insurance and economic growth in 29 European nations. Using the regression analysis and panel data from the period 1992 to 2005, the study revealed that insurance influences the economic growth of nations positively, however, nonlife insurance has more impact. Similarly, Ege and Bahadir (2011) found an important and positive relationship between insurance and economic growth in of nations.

Supplementary studies such as Kugler and Ofoghi (2005), Vadlamannati (2008), Han *et al.* (2010); Curak, Loncar and Poposki (2009), Avram, Nguyen and Skully (2010); Ghosh (2013); Horng *et al.* (2012), and Akinlo and Apanisile (2014) have also explored the link between insurance and economic growth in various countries and found a significant and positive relationship between the variables. Also, a current study by Din, Angappan and Baker (2017) narrowed the studies to China, India, Malaysia, United States, United Kingdom, and Pakistan using ARDL approach. The result exposed a positive and significant relationship between total insurance and economic growth for the countries above but a negative between insurance and economic growth exist for Pakistan in relation to the variable, international trade.

Pradhan *et al.* (2016) studied the links between insurance penetration, market capitalization, broad money and economic growth in South East Asian nations using data from 1988 to 2012. The study uses the Granger causality approach, the study found that insurance penetration and economic growth are cointegrated. Other studies on money supply and economic growth are Al-Yousif (2002), Calderon and Liu (2003), Chow and Fung (2011), and Hsueh *et al.* (2013). Al-Yousif (2002) studied 30 emerging nations and the study covers the period 1970 to 1999. The areas studied for Calderon and Liu (2003) is 109 countries and from 1960 to 1994 while Chow and Fung (2011) and Hsueh *et al.* (2013) covers 69 countries and 10 Asian countries, and 1970- 2004 and 1980-2007 respectively.

Related studies on market capitalization and economic growth as stated by Pradhan *et al.* (2016) are Dritsaki and Dritsaki-Bargiota (2005), covering the country Greece from 1988 to 2002; Enisan and Olufisayo (2009), 7 sub-Saharan African countries and from 1980 to 2004; Hou and Cheng (2017), Taiwan and from 1971 to 2004. Peia and Roszbach (2015) covering 22 advanced countries and from 1965 to 2011; Pradhan *et al.* (2016), 16 Asian countries and from 1988 to 2012. Rousseau and Xiao (2007), China and from 1995 to 2005.

2.2 Theories of insurance and economic growth

2.2.1 Financial Liberalization Theory

The revolutionary works of Patrick (1966), McKinnon (1973) and Shaw (1973) gave birth to the financial liberalisation theory which centres on jettisoning constraints on financial market and institutions, or when novelty advancements are introduced into the financial markets system to enhance growth in the economy (Arestis, Nissanke and Stein, 2005; Iacoviello and Minetti, 2003). After the seminar publication of Patrick (1966) on two possible associations, “demand-following” technique, in which financial progress in a country rises as the economy advances, and a “supply-leading” technique, in which the general growth of financial establishments leads to economic development, a substantial amount of studies have revealed a beneficial association between financial liberalisation and economic growth. Arestis, Nissanke and Stein (2005), states that the relationship between

financial development and economic growth has received a great deal of attention throughout the modern history of economics.

2.2.2 Circuit Theory

Bossone (1998 and 2001), in articulating the circuit theory of finance incorporated a microeconomic dimension into the theory. Central to the circuit process is the complementary functions of banks and non-banking financial intermediaries in originating money and making it circulate in a manner beneficial to all agents. The effect is that those financial systems where money and capital markets functions are segmented but fundamental as in many emerging economies are susceptible to circuit malfunctioning and instability. Rajan and Zingales (1998), pointed out that it is the availability of investment opportunities that drive growth.

The scholars added that the extended advancement of financial markets facilitated the export growth of sectors reliant on external finance and resolved that the linkage between financial development and growth is one by-product of the theory of financial markets and institutions, which reduce the cost of external finance for firms. A sound financial structure is an engine that drives economic performance through entrepreneurship growth as noted by Schumpeter (1934).

Others like Goldsmith (1969), Mckinnon (1973), and Shaw(1973), also acknowledged this view through the positive response of savings to the interest rate. Greenwood and Jovanovic (1990), established a model in which financial structure and economic performance are endogenously determined. The scholars highlighted that by pooling individual investment risk and remove uncertainty about the rate of return, the financial structure could stimulate faster economic progress.

2.2.3 Kaldor's Model of Economic Growth

The Kaldor model is an attempt to make savings-income ratio a variable in the economic growth process. It is based on the classical savings function which implies that savings, (premiums) generated by insurance companies equals the ratio of profit contributed to the national income or national output. The interpretative value of this model, according to Kaldor (1966), is the conceptualisation or treating of investment or the ratio of investment to output (I/Y) as an independent variable. An upsurge in the level of investment would raise the demand level, prices and income (Mongale and Tafadzwa, 2018).

3. Material and Method

The ex-post facto study strategy and the purposive sampling procedure was adopted for the study. This is the approach that establishes the causal relationship between the dependent and independent variables and participants are not randomly assigned. Purposive sampling technique is used to meet a particular need based on judgement (Onwumere, 2005; Samuel and Iyodo, 2011; Adebisi and Samuel, 2012). A secondary source of was also adopted because it falls within the objectives and hypothesis formulated for the study which is believed reliable and accessible documents for assessing the relationship between the non-life insurance industry and the Nigerian economy. The sources are NAICOM and CBN Statistical Bulletin.

3.1 Model Specification

This study is mainly quantitative and builds on existing studies and methodologies. The analytical procedures adopted in this study to test the hypothesis are as follows: multiple regression models, descriptive statistics, unit root test and ordinary least squares. The above methods are used mainly to avoid some challenges which include the issue of subjecting and bias of responses and relationships between variables.

In this study, the model is detailed in line with the works of Oke (2012), Curak, Loncar and Poposki (2009), ward and Zurbruegg (2000), Kugler and Ofoghi (2005). In the analysis of insurance sector development and economic growth in Nigeria by Oke (2012), using a modified model used by Curak, Loncar and Poposki (2009), the study used the Gross domestic product growth rate (GDPGR) at the market price as the dependent variable and for the explanatory variables, Oke (2012) added a number of Insurance Companies in Nigeria (NIC) and Total Insurance Investment (TII) into the modified model.

The model is however modified in this study by using the Gross Domestic Product growth rate (GGR) as dependable variable and by adding the following to the explanatory variables: Insurance penetration (non-life, savings, expenditures, investment and profits of the insurance industry with their time series data covering the period between 1988 and 2012.

Therefore, the model for this study, given the stated hypothesis can be specified as thus:

Non-life insurance business does not have a significant positive effect on the Nigerian economic growth;

$$GGR = f(NLIP) \dots \dots \dots 1$$

$$GGR = \alpha + \beta NLIP + \varepsilon_t \dots \dots \dots 2$$

Where: GGR denotes gross domestic product growth rate and NLIP, Non-life Insurance penetration and ε_t , the error term.

Introducing other control variables, we have:

$$GGR_t = \beta_0 + \beta_1 NLIP_t + \beta_2 GSAV_t + \beta_3 GEXP_t + \beta_4 PROF_t + \beta_5 INV_t + \varepsilon_t \dots \dots \dots 3$$

The log-linear model used goes thus:

$$LGGR_t = \beta_0 + \beta_1 LNLIP_t + \beta_2 LGSAV_t + \beta_3 LGEXP_t + \beta_4 LPROF_t + \beta_5 LINV_t + \varepsilon_t \dots\dots 4$$

Where; GGR denotes Growth rate of the gross domestic product; NLIP, Non-Life Insurance penetration; GSAV, Savings; INV for Investments GEXP stand for Expenditure; PROF represent Profits of the Insurance industry, and ε_t represents the error term. $\beta_0, \beta_1, \beta_2, \beta_3, \beta_4, \beta_5$ are the intercept and coefficients of independent variables.

The Gross Domestic Product Growth Rate (GRR) refers to the percentage change in a country's gross domestic product (GDP) when compared with the previous or the preceding year. It is significant for this study because it has been able to take care of the supposed effects of other economic variables beginning with the inflation rate. This is a slight departure from the study of Njegomir and Stojic (2010), Ward and Zurbruegg (2000) and Holsboer (1999), where they made use of the per capita gross rate of Nigeria's gross domestic product as their dependent variable in their studies.

Non-life Insurance Penetration (NLIP) is an Insurance business that does not deal with life. Using Beenstock, Dickinson and Khajuria (1988) and Outreville (1990) and this study adopt the total non-life premium. Profit of Insurance Industry (PROF) refers to the total profit generated by the insurance industry in a year. Profit of Insurance industry is obtained by deducting total expenditure from total income. This measure will be consistent with the works of Zhuo and Adams (2004) who explored the influence of life insurance and non-life insurance on the growth process of China.

Government expenditure (GEXP) which represent the amount of money spent by the government of a nation on providing goods and services for the nation such as education (Njegomir and Stojic, 2010). Government Savings (GSAV) Government's total savings are used by the government to help on the rainy days. It will be used as a proxy and as a central variable to measure the level of economic growth. Investment (INV) here refers to the total investment in the insurance business. It shows the level of the nation's growth. The higher the investment, the healthier the growth of that nation.

The direction and robustness of the analysis of the study would be determined through the unit root tests. EViews version 10 was utilized in carrying out the tests to determine the order of integration and incidence of unit root on the variables. Graphical presentation of the variables was also carried to confirm the unit root result and further examinations (see Table 1 and Figure 1 for unit root and graphical presentation results). All variables are in their log form.

From Table 1, the variables are integrated to the order of one (1) and zero (0), no variable is integrated to order of two (2) which automatically suggest the use of ARDL bound test approach for the study. The justification for the use of ARDL is established when variables are integrated of different orders ranging from level to first difference or both but not including second difference (Pesaran and Shin, 1998; Pesaran *et al.*, 2001; Narayan, 2003, 2004; Duasa, 2007). ARDL method to Cointegration will give a perfect, accurate and efficient estimation of variables especially when their unit-roots results show a mixture of variables being stationary at level and first differences (Atif *et al.*, 2010; Giles, 2013; Iheanacho, 2016; Marques *et al.*, 2016; Olayungbo and Adediran, 2017). When all the variables are integrated to the order of zero, the regression will be more appropriate (Nkoro and Uko, 2016).

However, the dependent variable (LGGR) turned out to be stationary at levels which suggest the subject under investigation is stable. This also suggests the regression model will be applied here because the dependent variable should only be integrated to the order of 1 for ARDL to be applied (Pesaran *et al.*, 2001; Giles, 2013).

From Figure 1, the variables are trending except for GGR reverting around the mean, thus implies that variable GRR is stationary at levels which confirms the result of the unit-roots in Table 1.

4. Result and Discussion

Table 1 below presents the unit root result of the variables while Figure 1 presents the graphical presentation of variables. Table 1 and Table 3 show the descriptive statistics result and regression analysis result carried out on the hypothesis earlier formulated for the study.

Table 1: Unit root result

Variables		ADF				PP			
		I	OT	I&T	OT	I	OT	I&T	OT
LGGR	Levels	-4.5618 (0.0013)	I(0)	-5.6935 (0.0005)	I(0)	-4.5568 (0.0013)	I(0)	-6.6967 (0.0000)	I(0)
	Δ	-8.7865 (0.0000)		-8.2437 (0.0000)		-19.9941 (0.0001)		-21.4832 (0.0000)	
LGEXP	Levels	-2.7788 (0.0751)	I(1)	-2.2676 (0.4356)	I(1)	-3.1330 (0.0364)	I(0)	-2.2676 (0.4356)	I(1)
	Δ	-5.6398 (0.0001)		-6.3550 (0.0001)		-5.6092 (0.0001)		-6.3723 (0.0001)	
LINV	Levels	-0.4788 (0.8798)	I(1)	-2.0913 (0.5254)	I(1)	0.0052 (0.9508)	I(1)	-1.9523 (0.5989)	I(0)
	Δ	-2.9596 (0.0508)		-2.8634 (0.0190)		-3.0211 (0.0465)		-2.9283 (0.0171)	
LNLIP	Levels	0.0228 (0.9525)	I(1)	-1.0691 (0.9153)	I(1)	-0.1123 (0.9380)	I(1)	-1.3594 (0.8490)	I(1)
	Δ	-4.0359 (0.0048)		-4.0329 (0.0208)		-4.3147 (0.0017)		-4.0034 (0.0221)	
LPROP	Levels	-4.2947 (0.0033)	I(0)	-3.3443 (0.0853)	I(1)	-1.2292 (0.6459)	I(1)	-2.6899 (0.2482)	I(1)
	Δ	-3.4531 (0.0204)		-4.8402 (0.0047)		-7.9542 (0.0000)		-10.4151 (0.0000)	
LSAV	Levels	-0.0108 (0.9492)	I(1)	-2.8605 (0.1909)	I(1)	-0.0108 (0.9492)	I(1)	-2.4606 (0.3430)	I(1)
	Δ	-4.0079 (0.0052)		-3.9350 (0.0255)		-3.9979 (0.0053)		-3.9181 (0.0264)	

Note: Values in the bracket, p-value; I, intercept; I&T, intercept and trend; OT, Order of integration; Δ , first difference.

Source: Authors' EViews Computation

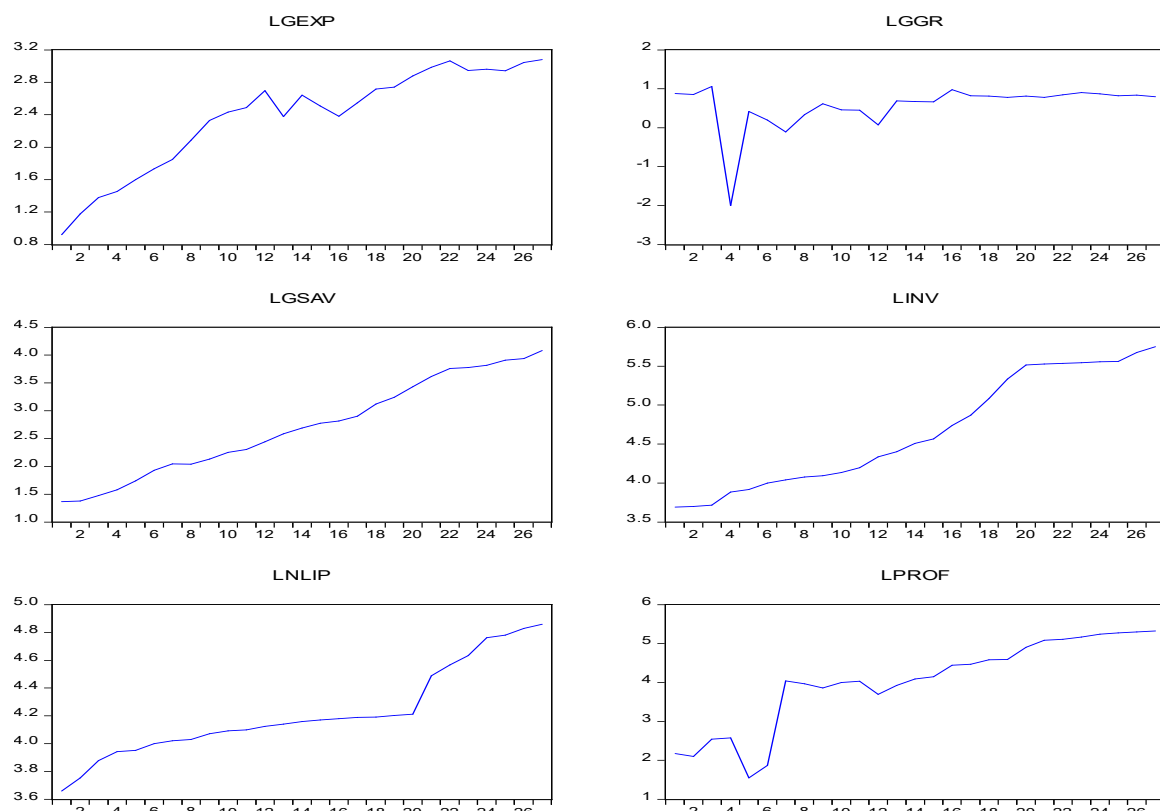


Figure 1: Graphical presentation of variables

Table 2: Descriptive Statistics Result

Year	LGGR	LNLIP	LGSAV	LGEXP	LPROF	LINV
Mean	0.566827	4.221544	2.707786	2.368934	4.000971	4.664938
Median	0.780317	4.159077	2.688464	2.507046	4.090970	4.507280
Maximum	1.055378	4.857226	4.079478	3.081491	5.318871	5.751068
Minimum	-2.000000	3.659308	1.366423	0.919078	1.549003	3.689948
Std. Dev.	0.584995	0.325210	0.871759	0.629277	1.144594	0.725192
Skewness	-3.321152	0.623358	0.047422	-0.823494	-0.770397	0.196054
Kurtosis	14.95673	2.537369	1.739272	2.546739	2.472269	1.477178
Jarque-Bera	210.4689	1.989371	1.798234	3.282765	2.984116	2.781826
Probability	0.000000	0.369840	0.406929	0.193712	0.224909	0.248848
Sum	15.30434	113.9817	73.11021	63.96122	108.0262	125.9533
Sum Sq. Dev.	8.897706	2.749803	19.75907	10.29574	34.06246	13.67349
Observations	27	27	27	27	27	27

Source: Authors' E-views Computation

For Non- life insurance penetration (NLIP), the mean within is 4.2215 while the medium value was 4.1591. Non-life Life insurance penetration in Nigeria is highest in 2011 when the value is 4.8572 while the year with the minimum life insurance penetration was in 1988 when the value was N3.6593. As uncovered by the skewness (0.6234) of Non-life insurance penetration signifying that the extent of departure from the mean of the distribution is positive showing that in general, there was a steady increase in non-life insurance activities/penetration from 1988 to 2014. The Jarque-Bera statistic which shows the normality of distributions is 1.9894 and since the probability of 0.3698 (37%) is greater than 5% significant level, the distribution is normally distributed. The JB criteria is to reject the null or any value above 0.05 which implies accepting the alternate, there is, normality is found in the data (Jarque and Bera, 1980).

Table 3: Regression Result^a

Variables	Coefficient	Std Error	t-statistics	Prob
LNLIP	4.523065	0.733974	7.971760	0.00
LGSAV	-65.13234	26.43255	-3.265410	0.01
LGEXP	-70.04228	69.72787	-1.291313	0.22
LPROF	0.923520	0.917443	0.673289	0.38
LINV	0.262278	0.213713	1.325101	0.42
C	321515.4	23144.00	9.923451	0.00
R ² =0.9684; AR ² =0.9521; DW= 1.9345; AIC 23.2876;				
SIC=23.5773; F-Stat=123.5125; Prob (F-Stat) = 0.00000				

^a = dependent variable = LGGR

$$LGGR_t = \beta_0 + \beta_1 LNLIP_t + \beta_2 LGSAV_t + \beta_3 LGEXP_t + \beta_4 LPROF_t + \beta_5 LINV_t + \varepsilon_t \dots \dots \dots 5$$

$$LGGR = 321515.4 + 4.523065LNLIP - 65.13234LGSAV_t - 70.04228LGEXP_t + 0.923520LPROF_t + 0.262278LINV_t + \varepsilon \quad 6$$

The table above shows the outcome of the regression analysis of the study from 1988 to 2014. The result reveals that the model for our study is fit (F-statistic =123.51) with a probability of 0.00000. The coefficient of determination (R²), which gauges the goodness of fit of the model, shows that the explanatory variables described 97% of the differences observed in the dependent variable. This was regulated by the Adjusted R² to 95%, demonstrating that there are other variables excluding the regressors that might likewise influence the dependent variable. The result shows that LNLIP has a positive and substantial impact on the LGGR of Nigeria (LNLIP coefficient = 4.52, p = 0.00 < 0.05, t-value = 7.9717). The control variable, LGSAV, has negative but significant impact on LGGR (LGSAV coefficient = - 65.13, p = 0.01 < 0.05, t-value = - 3.27). Also, LGEXP had a negative but insignificant impact on LGGR (LGEXP coefficient = -70.04, p = 0.22 > 0.05, t-value = - 1.29). Likewise, LPROF had a positive but non-significant impact on LGGR (LPROF coefficient = 0.92, p = 0.38 > 0.05, t-value = 0.67) while LINV had a positive and insignificant impact on LGGR (LINV coefficient = 0.26, p = 0.42 > 0.05, t-value = 1.33).

It is obvious from the result above that the null hypothesis is rejected and the alternate accept which specifies that non-life insurance penetration had a positive and significant impact on economic growth in Nigeria.

5. Conclusion

There is no reservation that the role of insurance which is summarized as intermediation, indemnification and risk transfer in an economy with regards to economic growth and development cannot be played down and at the same time, underestimated. No-life insurance premiums secure the lives and future of the people. It helped bring

financial stability and promote economic development directly and indirectly in many nations including Nigeria. However, the role differs for diverse economic levels and principally depend on proxies used in gauging the insurance activity. this study examines the effect of non-life insurance penetration on the economic growth in Nigeria between 1988 to 2014 using five distinct proxies.

Results revealed that Non-life insurance has a positive and significant effect on the economic growth of Nigeria. Also, it shows that insurance profit and investment had a positive effect on the Nigerian economy but not expressively enough. On the other hand, savings and expenditure had an adverse effect on the economy. Although, savings influence is significant.

The positive and substantial impact of non-life insurance penetration on economic growth as revealed in the result submits that there has been an upward movement and advancement of nonlife insurance penetration in Nigeria. The study, therefore, recommends that more awareness should be created to boost the involvement of the product industry and firms as this will expand the activities of the insurance industry in Nigeria. Also, this study recommends an increased diversification of insurance products, especially in non-life businesses. The insurers should come up with new non-life products and adjustment of existing insurance products, thus availing customers the opportunity of choosing from a variety of products. There is also need for the insurance companies to take advantage of the non-life insurance products made compulsory by law to substantially increase their premium income and increase insurance penetration in the economy as this will foster economic growth in Nigeria.

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