INSURANCE INVESTMENT FUNDS AND ECONOMIC GROWTH IN NIGERIA: AN EMPIRICAL ANALYSIS (2000 – 2015)

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Abstract

Insurance is a financial contract and risk transfer mechanism suitable for managing consequences of insurable risks associated with personal and business activities. Insurance plays a vital role in the growth of an economy. The study assessed the contribution of insurance investment funds to economic growth in Nigeria, using 16-years (2000 – 2015) total insurance investment and Gross Domestic Product (GDP) data. Insurance investments have been considered by researchers, academics and analysts due to its importance and consequences on countries'economic growth. However, the impact of total insurance investment on economic growth in Nigeria using annual data from 2000 to 2015 has not been undertaken. Hence, there is a knowledge gap; and this study filled this knowledge gap. Secondary data, sourced from the Central Bank of Nigeria (CBN) Statistical Bulletin and Nigeria Insurers Digest are used for the study.Pearson's movement correlation coefficient and ordinary least square (OLS) method were used for data analysis and hypothesis testing respectively. The findings indicated that there is a strong positive relationship between Nigeria's economic growth and total insurance investment; and there is a positive correlation between total insurance investment and GDP in Nigeria. It was recommended that regulation of the Nigeria insurance sector should be enhanced to improve the sector's performance and ensure increased total insurance investment in Nigeria economy. The implication for practice is that formulation of economic policies that enhance insurance practices and deepening insurance penetration by the government will increase insurance investment fund.

Keywords: *Insurance sector, Gross domestic product, Insurance fund, Economic growth, Nigeria.*

1. Introduction

Uncertainty impacts both personal and business activities. This is because risk and uncertainty are integral parts of life. Processes and activities have become extremely complicated due to modernization and technological advancement (Arnoldi, 2009; Smith, Cebulla, Cox & Davies, 2006). Risk is associated with uncertainty; but, risk represents specific ways a reality can be conceptualized and rendered controllable (Zinn & Taylor-Gooby, 2006). This is because technological advancement is not completely safe; and business decisions are made in a dynamic business environment (Chevalier-Roignant & Trigeorgis, 2011; Johnson, Whittington, Angwin, Regner & Scholes, 2014; Jones & George, 2017). Insurance is a financial contract and risk transfer mechanism suitable for managing consequences of insurable risks associated with personal and business activities (Biggs & Richardson, 2014; Carvalho de Mello, 2011; Fadun, 2013). Hence, insurance is relevant in our society today as it plays vital role in the management of individual, household, organisations and governments risk exposures.

The Nigeria insurance sector is an important part of the Nigerian economy. Insurance and reinsurance companies are sellers of insurance covers or providers of insurance covers to the insuring public. Insurance companies (insurers) underwrite insurable risks in return for a given consideration, known as the premium, which serves as the main source of insurance funds (Igbodika, Ibenta & John, 2016; Madukwe & Obi-Nweke, 2014; Ubom, 2014). Hence, it is expected that the insurance sector activity should impact on economic growth as a provider of insurance coverages. The insurance sector also promotes economic growth by mobilizing savings and investible funds, accumulated from premiums and underwriting profits, thereby making insurance investment fund available to the capital and other financial markets (Oke, 2012; Olayungbo, 2015; Yinusa & Akinlo, 2010).The remaining part of the paper is divided into five sections, focusing on aim and significance of the study; literature review; research methodology; data analysis and discussions; and conclusions, summary and implications of findings

2. Aim and Significance of the Study

The aim of the study is to assess the contribution of insurance investment funds to the economic growth in Nigeria. Specific objectives of the study are to ascertain the relationship between insurance investments and economic growth in Nigeria; and examine the impact of insurance investment on economic growth in Nigeria.The scope of the study is limited to contributions of insurance investment to the economic growth in Nigeria, using 16-years (2000 – 2015) total insurance investment and Gross Domestic Product (GDP) data. The study is important as we envisaged that its findings are beneficial to policy-makers, academia and other researchers. To policy makers, the findings may constitute the basis for making economic policies. To academia, the findings constitute contribution to knowledge as an addition to existing literature on insurance funds investment and economic growth. To other researchers, the findings of the study can be used as a research resource on related subject matter in the future.

3. Literature Review

3.1 Insurance

Insurance is a contractual agreement between two parties, insured (buyer) and insurer (seller), whereby the insurer undertakes to indemnify the insured in the event of assured contingencies (uncertainties or losses) in exchange for premium paid by the insured, subject to the contract terms and conditions (Skipper and Kwon, 2007; Boland *et al.*, 2009; Thoyts, 2010; Fadun, 2013). Insurance is a risk transfer mechanism that works based on law of large numbers and economies of large scale. It is designed to protect the financial well-being of individual, household, companies and other entities in the case of unexpected loss (Oke, 2012). Insurance has also been described as the corner stone of modern day financial services (Yinusa & Akinlo, 2013). Osipitan (2009) argued that the insurance is vital to a financial system due to its role in assisting people and businesses to manage their resources and mitigate risks. Benefits of insurance include: guaranteed financial protection against insured losses, promote culture of long-term saving through life insurance contracts, help to mobilize funds to finance government's projects to ensure national development, and contribute to GDP and economic development (Fadun, 2013; Gabriel, 2015; Yinusa & Akinlo, 2013). Other benefits include promotion of financial stability through stimulation of the growth of debt and equity markets for a more efficient capital allocation, facilitation of trade and commerce, education of losses through the risk management expertise of the insurance sub-sector, transmission of information about risks throughout the society so that economic actors could make more informed decisions, and encouragement of a greater efficiency and depth in the financial sector through complementing, competing with and otherwise improving the services offered by other financial institutions (Fadun & Hood 2016; Vaughan & Vaughan, 2014).

The insurance business broadly entails three categories: non-life, life and re-insurance. Non-life insurance denotes short term funds while Life denotes extended term funds. However, re-insurance guarantees or protects other insurance companies against loss by spreading their risks to other insurers/reinsurance. The role of insurance in the Nigerian economy cannot be overstated. One major role of the insurance industry in Nigeria is to promote development and protection of the insuring public against their insurable risks (Fadun, 2013; Yinusa & Akinlo, 2013). Insurance companies' funds are invested in stock markets thereby increasing stocks' prices for the benefit of investors and improvement of Nigeria economy (Agwuegbo, Adewole & Maduegbuna, 2010; Igbodika et al., 2016; McGrath, 2014; Ubom, 2014). In 2016, the Nigerian insurance sector invested an estimated N178 billion in the banking industry as placements and deposits and held treasury instruments of over N270 billion (Agusto & Co, 2017).

The insurance sector plays a vital role in the development of a nation by providing a mechanism for transferring businesses and individual risks from owners to insurers. In many countries, the insurance industry plays active and leading role in the stability and efficient diversification of risks; thereby contributing to national economic development. The role of insurance in the Nigerian economy cannot be overstated; though, the Nigeria insurance sector has not fully tapped its enormous potential (Gabriel, 2015). The Nigeria insurance sector strategic importance is underpinned based on underwriting business and individual risks through which estimated gross premium income (GPI) of N356 billion was

generated in 2016, which is about 10% growth over 2015 GPI (Agusto & Co, 2017). According to Oxford Business Group (2017), the insurance sector has witnessed rapid growth in recent years. The Nigerian underwriters reported total Gross Written Premiums (GWPs) of about N350 billion in 2015, which was about 19% above the previous year (Oxford Business Group, 2017). The Nigerian insurance market has attracted several foreign insurance investors and practitioners in recent years (Oxford Business Group, 2017).

3.2 Empirical Review on Economic Growth and the Insurance Sector

The term economic development is concerned with promotion of advanced economic activity through education, improved tools and techniques, financing, better transportation facilities, and creation of new businesses (Microsoft Encarta, 2009). Though economic growth and economic development are often used interchangeably, but, there is a disparity between these concepts in terms of definition and measurements. Growth is usually measured using Gross Domestic Product (GDP); but, development relates to qualitative aspect of a nation that cannot assume equal measurement with growth (Aremu, 2013). The impact of the insurance market on economic growth and development has been highlighted by many authorities in the field. The variety and diversity of the insurance products depend on the maturity of the sector, the market and the customer on the market in question. A stable macroeconomic environment promotes savings necessary to finance investments, a pre-condition for achieving viable insurance industry and sustainable economic development.

Several empirical evidences in the literature have highlighted the importance of the insurance industry in stimulating growth and development of an economy (Cristea, Marcu & Carstina, 2014; Economic Times, 2017; Gabriel, 2015; Oke, 2012; Yinusa & Akinlo, 2013). Ward and Zurbruegg (2000) examined short and long run relationship between economic growth and insurance premium of nine OECD countries for the period 1961 to 1996. Based on their assessment, they found that the causal relationship between economic growth and insurance market activity vary across countries. Though the exact causes were not determined but in their view, potential causes are country specific in terms of cultural, legal and regulatory environment (Ward & Zurbruegg, 2000). Kugler and Ofoghi (2005) examined the long run relationship between development in insurance market size and economic growth using Johansen's cointegration and Granger causality tests for the period 1971 to 2003. The findings indicated that there is causal relationship between insurance market activity and economic growth (Kugler & Ofoghi, 2005). The effect of banking and insurance on economic growth using a cross-country data of 55 developed and developing countries for the period 1980 to1996 indicated that synergy exists between banks and insurance; and they provided greater benefit to economic growth (Webb, Grace & Skipper, 2002).

Ozuomba (2013) study on impact of insurance on Nigeria economic growth revealed that there is significant relationship between insurance premium and economic growth in Nigeria. Haiss and Sumeji (2008) analysed the impact of insurance on economic growth measured by GDP on 29 countries belonging to the European economic region for the period 1992 to 2005. Their findings indicated that life insurance has a higher impact on

economic growth at low levels of economic development, and the impact of non-life is at the middle level (Haiss & Sumeji, 2008). Arena (2006) also conducted a cross sectional analysis on causal relationship between insurance market activity and economic growth with a sample of 56 developed and developing countries for the period 1976 to 2004. The results suggested a positive and significant effect of insurance market activity on economic growth, thereby affirming that there is a positive relation between the growth of insurance sector and economic development (Arena, 2006). Akinlo and Apanisile (2014) examined the impact of the insurance industry on economic growth in sub-Saharan Africa countries over the period 1986-2011 using pooled OLS, fixed effect model and generalized method of moment panel model for estimation. The findings showed that the insurance market has positive and significant impact on economic growth (Akinlo & Apanisile, 2014). This implies that there is a positive relationship between premium and economic growth of sub-Saharan African countries.

Agwuegbo et al. (2010) used factor analysis approach to predict insurance investment and its implication for Nigerian economic growth; and their findings revealed that the Nigeria insurance sector holds a reasonable percentage of the country's total investable fund generated by the capital market. Similarly, Nwinee and Torbira (2012) utilised time series data (1980 - 2011) to investigate insurance investment and Nigeria's economic development. Their results showed that, in the short run, insurance investment in stock and bonds are positively and significantly correlated with Nigeria's GDP (Nwinee & Torbira, 2012). Olayungbo (2015) study affirms that the Nigeria insurance industry (via life and non-life insurance businesses) contributed to and complemented the growth of the Nigerian economy. Sambo (2016) study, effect of insurance portfolio investment on Nigeria's gross domestic product, showed that there is a positive relationship between insurance investments and GDP in Nigeria.The result of Igbodika, Ibenta and John (2016) study, which considered the contribution of insurance investment to economic growth in Nigeria from 1980-2014, revealed that the Nigerian insurance sector investment has positive and significant impact on Gross Domestic Product. Furthermore, Mojekwu, Agwuegbo and Olowokudejo (2011) study showed that there is functional relationship between the volume of insurance contribution and economic growth in Nigeria. Akinlo (2013) study also affirmed that the insurance sector contributes to economic growth in Nigeria because the insurance industry provides necessary long-term fund for investment and absolving risks.

By way of investment of insurance fund, the Nigerian insurance sector contributes to the Nigeria insurance industry. Consequently, the premium income of insurance industry has a positive influence on GDP. This is consistent with the findings of Umoren and Joseph (2016) which noted that the premium income of insurance industry has a positive influence on GDP, though insignificant and need to be improved substantially. Essentially, the primary benefit of insurance fund investment is to generate good returns to ensure that insurers meet their long-term obligations, including claims settlement. Insurance investment portfolio assets may include: government and securities, stocks and bonds, real estate mortgage, policy and loans, cash at hand and deposit, and bill of exchange (Agwuegbo et al, 2010; Madukwe & Obi-Nweke, 2014; Nwinee & Torbira, 2012; Ubom, 2014).

The implication of discussions in the section is that the investment of insurance funds can impact the level of contribution of the insurance sector to the Nigerian economy. This can also impact the level of investment returns realizable by the insurance sector. Consequently, we posed the hypothesis that:

$H_{0:}$ Total insurance investment has no positive impact on economic growth in Nigeria.

$H_{1:}$ Total insurance investment has positive impact on economic growth in Nigeria.

The hypothesis is tested in Section 5 of the paper, using Ordinary Least Square method. Having reviewed relevant literature and formulated research hypothesis in this section, the study's research methodology is presented in the next section.

4. Research Methodology

The research methodology adopted for the study is presented in this section. The study is an empirical research, with analytical research design. Secondary data, sourced from the Central Bank of Nigeria (CBN) Statistical Bulletin and Nigeria Insurers Digest, are used for the study. Sixteen (16) years (2000 – 2015) total insurance investment and GDP) data are engaged to explore the contribution of insurance funds investment to economic growth in Nigeria.

Pearson's product movement correlation coefficient and ordinary least square (OLS) techniques are used to analyse data collected for the study. Pearson's product movement correlation coefficient measures the strength and direction of relationship that exists between two variables (dependent and independent). OLS technique was employed to obtain numerical estimates of co-efficient in the equation; and ascertain changes that take place between these variables, and their significance. OLS method is used because it possesses some optimal properties in that its computation procedure is fairly simple and possesses essential component of order estimation techniques. The estimation covers the period of 16-years (2000 - 2015). In demonstrating the application of OLS method, econometric views (E-views) statistical package was used to analyse GDP as the dependent variable and total insurance investment as the independent variable.

Models Specification

Product movement correlation coefficient is used for data analysis, and its formula is presented below:

$$R = \frac{n\sum xy\_(\sum x)(\sum y)}{\sqrt{[n\sum x^2-(\sum x)^2]\times[n\sum y^2-(\sum y)^2]}} \quad \text{..... Model 1}$$

Where:

R= the correlation coefficient,
X= independent variable (logged Total insurance investment),
Y= dependent variable (logged real GDP),
N= number of years, and
∑= summation sign.

LgGDP = f(lgTINV)

$LgGDP = \alpha_0 + \beta_1 lgTINV + \mu$ ……**Model 2**

Where:
LgGDP = the logged (real) gross domestic product.
α_0 = Constant.
β_1 = Coefficient of the independent variable (investment).
LgTINV = the logged total insurance investment.
μ= Error term

5. Data Analysis and Discussions

The data collected for the study is analysed and discussed in the section. Pearson's coefficient correlation and OLS are used to analyse Nigeria's real GDP (independent variable - logged

Total insurance investment) and Nigeria's Total Insurance Investment (dependent variable - logged real GDP) for the period of 2000 – 2016, as presented in Table 1.

Table I: Total insurance investment (x) and GDP (y) from 2000 - 2016

Year	Total insurance investment(t) (x)	GDP (y)
2000	7.734773	4.374167
2001	7.821800	4.402563
2002	7.902303	4.461764
2003	8.090584	4.501189
2004	8.187857	4.544323
2005	8.265373	4.573741
2006	8.411383	4.602011
2007	8.579686	4.632684
2008	8.631009	4.662876
2009	8.515187	4.697718
2010	8.506695	4.737290
2011	8.478361	4.759751
2012	8.625161	4.777643
2013	9.718385	4.800846
2014	8.777074	4.827064
2015	8.835362	4.839000

Source: CBN Statistical Bulletin (2002 - 2015);and Nigeria Insurance Digest (2002 - 2015)

Table 1 shows Nigeria's total insurance investment and Nigeria's real GDP the period of 16-years (2000 - 2015). The value of the two columns (Table 1) have been logged using the excel spreadsheet to reduce size of the value of each variable. It can be observed from Table 1 that total insurance investment increased consistently from the year 2000 to 2008. In the year 2009, total insurance investment reduced from 8.631009 to 8.515187; but, GDP increased continuously from 2000 – 2015.

Meanwhile, there was about 4.6% increase in total insurance investment for the first four years (2000-2003) which resulted to about 2.9% increase in GDP. This implies that there was a positive correlation (r=0.951) between total insurance investment and GDP. For the next four years (2004-2007), total insurance investment increased with about 4.8%, while GDP increase was about 2.0%. There was an increase of 0.2% between these years (i.e. from 2000-2003 and 2004-2007) in total insurance investment; but, the increase in total insurance investment did not impact substantially on GDP within these periods (2000-2003, and 2004-2007). This is obvious as there was a decline of 0.9% in GDP between years 2000-2003 and 2004-2007, and a positive relationship (r=0.965016) was still sustained during the period 2004-2007. The total insurance investment declined (-1.8) from 2008 – 2011, which implies a negative and significant reduction of insurance investment; but, GDP increased with about 2.1% during this period (2008 – 2011). The implication of this is that there was an inverse relationship (r=-0.857360) between total insurance investment and GDP between 2008 and 2011. For the last four years (2012-2015), total insurance investment was 2.4% and GDP during the period was 1.3%. This indicated a positive relationship (r=0.994997) between total insurance investment and GDP during the period. There was about 4.2% increase in total insurance investment within 2008-2011 and 2012-2015; but, there was, while a 0.8% decrease in GDP between the years 2008-2011 and 2012-2015.

Applying Pearson's Product Correlation Coefficient formula;

$$R = \frac{n\sum xy\_(\sum x)(\sum y)}{\sqrt{[n\sum x^2-(\sum x)^2]\times[n\sum y^2-(\sum y)^2]}}$$

Compositions of Pearson's Product Correlation Coefficient (R) are computed and presented in Table 2 (Contingent Table).

Table 2: Contingency Table

Year	Total insurance investment(x)	GDP (y)	x^2	y^2	xy
2000	7.734773	4.374167	59.82671	19.13333	33.83318
2001	7.8218	4.402563	61.18056	19.38256	34.43597
2002	7.902303	4.461764	62.44639	19.90734	35.25821
2003	8.090584	4.501189	65.45755	20.2607	36.41724
2004	8.187857	4.544323	67.041	20.65087	37.20826

2005	8.265373	4.573741	68.31638	20.91911	37.80367
2006	8.411383	4.602011	70.75136	21.17851	38.70928
2007	8.579686	4.632684	73.61101	21.46176	39.74697
2008	8.631009	4.662876	74.49431	21.74241	40.24532
2009	8.515187	4.697718	72.50842	22.06856	40.00195
2010	8.506695	4.73729	72.36386	22.44192	40.29868
2011	8.478361	4.759751	71.88261	22.65523	40.35489
2012	8.625161	4.777643	74.3934	22.82588	41.20794
2013	9.718385	4.800846	94.44702	23.04812	46.65647
2014	8.777074	4.827064	77.03703	23.30055	42.3675
2015	8.835362	4.839	78.06361	23.41592	42.75431
TOTAL	135.081	74.19463	18246.87	344.3928	637.2998

Using the results of Table 2, R is calculated below.

$$R = \frac{16(627.2998) - (135.081)(74.19463)}{\sqrt{\{16(1143.821) - (135.081)^2\} \times \{16(344.3928) - (74.19463)^2\}}}$$

$$R = \frac{10036.7968 - 100222848}{\sqrt{\{18301.136 - 18246.8766\} \times \{5510.2848 - 5504.84312\}}}$$

$$R = \frac{14.512}{\sqrt{(54.2594 \times 5.44168)}}$$

$$R = \frac{14.512}{17.183198}$$

R = 0.84454593

Since Pearson's product correlation coefficient (R) result is 0.84454593 (0.84), this implies that there is a strong and positive relationship between total insurance investment and GDP. To further ascertain this (that there is a strong and positive relationship between total insurance investment and GDP) result, the research hypothesis formulated in Section 3 of the paper is validated below using OLS method.

Hypothesis Testing

The research hypothesis (null and alternative) formulated for the study states that:

H_0: Total insurance investment has no positive impact on economic growth in Nigeria.

H_1: Total insurance investment has positive impact on economic growth in Nigeria.

The hypothesis is validated below with OLS method, using E-views 9 software. The E-view 9 output of OLS analysis is presented as an appendix; and computation of the result is presented in Table 3.

Table 3

Variables LGGDP	**Coefficients**		**Standard Error**	**t-statistic**	**Probability**
	Parameters	**Values**			
C	α_0	2.378124	0.383042	6.211125	0.0000
LGTINV	β_1	0.267459	0.045303	5.903776	0.0000
R Squared	0.713435				
Adjusted R-squared	0.692966				
F-statistic	34.85457				
Prob. (F-statistic)	0.000038				
Durbin-Watson Stat.	1.638968				

Source: Researchers' Computation based on OLS results via E-view 9 software.

From Table 3, it can be deduced that total insurance investment has a significant impact on gross domestic product in Nigeria. This is so because the t-statistic as calculated using the OLS method has a probability value of 0.0000, which is less than the 5% criterion to accept or reject the null hypothesis. It can also be deduced that the ratio of changes in the dependent variable (GDP), which can be attributed to the independent variable (total insurance investment) is 71.34%. This is known as the R-squared. The adjusted R-squared, which gives a more reliable ratio of change to the estimate, is 69.29%. Furthermore, the Durbin-Watson statistic measures the presence of autocorrelation problem of regression in Model II (see Section 4). The calculated value of test statistic is 1.638968, showing approximately the absence of autocorrelation problem of regression in the model, which conformed with the benchmark of 2.0. In addition, the F-statistic (34.85457) indicates that there is little or no variation between the variables in Model II; and this can be seen from its probability value which is less than 0.05 (0.000038).

Based on Table result, the null hypothesis (which states that there is no positive impact on economic growth by total insurance investment) is rejected. This is because the OLS result (Table 3, and Appendix 1) indicated that total insurance investment impact significantly and positively on economic growth, based on t-statistic test (5.903776) result. Hence, the null hypothesis is rejected and the alternative hypothesis (which states that: total insurance investment has positive impact on economic growth in Nigeria) is accepted. Furthermore, the hypothesis results also revealed that there is a positive relationship between total insurance investment and economic growth in Nigeria. The result corroborated the Pearson's product correlation coefficient (0.84) result which indicated that there is a strong and positive relationship between total insurance investment and GDP in Nigeria.

6. Conclusion, Summary and Implications of Findings

6.1 Conclusion and Summary of Findings

The study has assessed the contribution of insurance investment funds to the growth of the Nigeria economy, using 16-years (2000 – 2015) total insurance investment and Gross Domestic Product (GDP) data. The study has explored the relationship that exists between total insurance investment and its impact on the growth of Nigeria economy (GDP). The findings revealed that there is a strong and positive relationship between Nigeria's economic growth and total insurance investment; and there is a strong and positive relationship between total insurance investment and GDP in Nigeria. First, Pearson's correlation coefficient was computed and the result (0.84) shows that there is a significant positive relationship between total insurance investment and economic growth (GDP). Furthermore, results of OLS analysis indicated that the t-statistic of total insurance investment is 5.903776, with a probability value of 0.0000. This suggests that total insurance investment impact significantly on Nigeria's economic growth (GDP). The OLS result also revealed that the ratio of change in the dependent variable (economic growth - GDP) is attributable to changes in the total insurance investment (independent variable) by 71.34%. Furthermore, the Durbin-Watson statistic was calculated with OLS as 1.638968. This measures the presence of autocorrelation problem of regression in Model II (see Section 4). Based on the result, there is an absence of autocorrelation problem of regression in the Model, as this conforms to the benchmark of 2.0. F-statistic was also calculated using the OLS technique and its value was given as 34.85457, with a probability value of 0.000038. This indicated that there is little or no variation between independent variable - total insurance investment) and dependent variable (economic growth - GDP) in Model II because the probability value is less than 0.05 benchmark.

6.2 Recommendations

Based on the study's finding, the following recommendations are put forward:

1. The regulation of the Nigeria insurance sector should be enhanced to improve the sector's performance and ensure increased total insurance investment in Nigeria economy. This is beneficial as increase in total insurance investment would enhance the economic growth of Nigeria.

2. Insurance business investment strategies should be more robust to guarantee a reasonable degree of hedge against investment risk. This should ensure higher investment returns, which can also be reinvested into the nation's economy.

3. The insurance sector investment guidelines should be reviewed to ensure viable insurance investment portfolios. This would enhance the insurance sector investment returns and improve the public confidence in insurance sector.

6.3 Implications of Findings

The implication, based on the findings, is that there is a positive relationship between total insurance investment and economic growth. This suggests that as total insurance investment increases, economic growth increases; and decrease in total insurance

investment would also result to decline in economic growth. The implication of significant impact of total insurance investment on economic growth is that there is a high percentage of change caused by total insurance investment in economic growth (GDP). The implication for practice is that formulation of economic policies that enhance insurance practices and deepening insurance penetration by the government will increase insurance investment fund. This is because formulation of investment friendly policies would improve and increase insurance long term investment fund, thereby enhancing Nigeria' economic growth. Moreover, if the nation's economy is in a better shape, the prospective insuring earning capacity would be improved. This would impact positively on demand for insurance product thereby increasing available insurance investment fund.

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APPENDIX 1
ORDINARY LEAST SQUARE

Dependent Variable: LGGDP
Method: Least Squares
Date: 05/13/17 Time: 16:53
Sample: 2000 - 2015
Included observations: 16

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.379124	0.383042	6.211125	0.0000
LGTINV	0.267459	0.045303	5.903776	0.0000

R-squared	0.713435	Mean dependent var	4.637164
Adjusted R-squared	0.692966	S.D. dependent var	0.150569
S.E. of regression	0.083431	Akaike info criterion	-2.013124
Sum squared resid	0.097450	Schwarz criterion	-1.916551
Log likelihood	18.10500	Hannan-Quinn criter.	-2.008179
F-statistic	34.85457	Durbin-Watson stat	1.638968
Prob(F-statistic)	0.000038		